

THE AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of Man.--Washington.

Vol. I.

New-York, June, 1842.

No. 3.

A. B. ALLEN, and R. L. ALLEN, Editors.

GEO. A. PETERS, Publisher, 36 Park-Row.

"THE AMERICAN AGRICULTURIST"

will be published Monthly, each number to contain thirty two pages, royal octavo.

Terms.--One Dollar per annum payable strictly in advance.

Six Copies will be sent for \$5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for \$20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, No. 36, Park Row, New-York.

Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.

Each number of the Agriculturist contains but one sheet, and will therefore be subject to newspaper postage only, which is one cent in the State, or within 100 miles of its publication, and one and a half cents if over 100 miles without the State.

Advertisements will be inserted at \$1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

Pruning and Care of Fruit Trees.

The proper season for pruning fruit trees is still a disputed question. Some of high authority, contend it should be done in mid winter, or at any time when vegetation is not in progress. Others claim that the only proper season is when the sap begins to flow freely in the spring, and before the buds have become fully developed. A third class, among whom we must rank ourselves, insist that it should be done after that period when the excessive flow of thin and watery sap has subsided, and the leaves have fully matured, which happens in this latitude, from the 20th June to 15th July. For this last opinion, there are two important advantages: 1st. There are no obtrusive young shoots pushing themselves forward where the branches are lopped off, as at other times: and 2d, the wounds made in pruning are immediately covered with a thick gummy sap, which, by effectually shutting up the pores of the wounded limb, secure a rapid healing of the part, and a re-covering by the extension of the bark from every side till it meets and is effectually joined in the centre.

These reasons are conclusive with us, and we think should be so with our readers, until they can show some better for the contrary practice.

The cause assigned, for the effectual protection and speedy recovery of the maimed part, by some, who have supposed they were speaking philosophically on the subject, is altogether a mistaken one. They assume two distinct periods during the existence of the summer foliage, one the ascent, or upward flow of the sap; the other its downward course, or descent to the roots. Let us correct this misapprehension here. The sap circulates throughout the entire length and breadth of the tree, from the minutest spongioles of the root, invisible to the naked eye, up to the farthest point of the topmost leaflet; just as the blood courses through the animal system. In the tree, the leaves are the lungs, the principal respiratory organs that change the character of the fluid, giving out oxygen and inhaling carbon from the atmosphere; though the bark of the fresh shoots perform this office to no inconsiderable extent, and at all times, at every period of the tree's life, there is an intimate and vital connection of the bark with the surrounding air, perspiring its sap and imbibing a portion of the atmosphere; an operation, analagous to the functions of the skin in the animal system.— This constant circulation of the sap is a law so irrevocably fixed upon the living tree, that even in mid winter, when not absolutely arrested by congelation, it still circulates; changes are still in progress within the trunk and branches, and the air from without is constantly effecting some alteration in the condition of the vital fluid. Life still manifests itself, and like every other living thing endued with this inscrutable principle by its Maker, it is incessantly occupied in the exercise of its peculiar functions.

But though the sap is constantly *descending* as well as ascending, it descends in a very much diminished quantity, owing to the escape of moisture through the leaves and branches. The *exchange* of oxygen for carbon is about equal in *quantity*, but owing to evaporation, the downward current is not only less but different in quality, is of a thicker and more viscid consistency, and the volume is rendered still less in every successive advance it makes towards the roots, as it is constantly appropriated between the inner bark and the alburnum or outward wood, for the future growth of the tree.

Notwithstanding the much more favorable condition for healing, when trees are pruned at the proper season, it is always especially when large limbs have been cut off, to apply a salve or dressing to the wound. We give for this purpose the following composition: 1-2 lb. tallow, 2 lbs. tar, and 1 oz. saltpetre thoroughly mixed while warm: or equal parts of clay and fresh cow dung with strong fresh ashes added to the mixture: or tar and brick dust.

Young trees in the nursery should always be trimmed effectually the year before transplanting, which if done after the formation of the wood, at the time above specified, is equivalent to pruning when set out in the fall or succeeding spring. When the transplanted tree has begun to thrive vigorously, the pruning should be carefully attended to every season, and the supernumerary branches cut away, leaving such only as have ample room to push themselves out to the light and sun, and allowing none to cross each other. By cutting off the limb while young a smaller wound is made, and this is almost immediately healed in the vigorous tree. An equilibrium should be kept up as nearly as possible in the top, so as to have the trunk the centre of gravity. All decayed or partially decayed limbs should be at once severed from the tree. They unfit the remainder of the tree for the full performance of its duty, as effectually as cramp or rheumatism in a limb does the human system. In plumbs and cherries, the small limbs cut off should be separated an inch or two from its junction with the main stem, and all the little spurs must be left, as these afford the buds for the embryo fruit. The apple, the pear and the peach should be trimmed close to the fork or crotch, which will afford a better opportunity for the healing of the wound. Such limbs should be removed, as come from the trunk or other limbs in a manner likely to be split or broken by high winds or a large burden of fruit. There is not so much danger of the apple in this respect as from other trees, as it is a peculiarly tough and adhesive wood. But with other fruit trees, a skilful eye will do much to prevent the lamentable sight of *breaking or*

splitting down. The axe or hatchet ought never to be used unless by one skilful enough to leave a perfectly smooth surface. If a saw is used, the surface ought to be perfectly smoothed before the salve is applied, and especially around the rim. When these operations are carefully and skilfully performed, a large increase in the quantity and quality of the fruit is the invariable result.

But there are some other important matters to be attended to at this season, connected with the orchard. The bark on the trunk, when loose and rough, or *hide-bound*, ought to be scraped off with a hoe or other instrument, but never to the injury of the *live* bark. A wash of strong soap suds, with the addition of a little saltpetre, or common salt or urine, should be applied, or if this is not convenient, a good coating of lime and salt, (common whitewash.) This application has a tendency to oust insects and destroy them.

The turf over the roots immediately around the trunk should be removed, and a quantity of ashes, lime, or a little salt placed there, which at the same time that it adds to the nutriment of the tree, has a tendency to destroy insects and their eggs deposited there.

The addition of swine and poultry to an orchard during the season of vegetation is invaluable. The curculio, one of the deadliest foes to fruit, is almost annihilated by their presence, and other vermin are to a great extent destroyed by them. Slugs and caterpillars that are fastened on the trees are much diminished and sometimes entirely eradicated by the little feathered bipeds that visit the orchard; and this offers a strong inducement, where taste and humanity are wanting, to keep the little *unfeathered* bipeds from disturbing them, or breaking up their nests. Such enemies as maintain their ground against all these remedies and precautions, should be removed by hand.

We may as well add here, a practice, long and successfully used in a portion of Europe, and with great effect in parts of our own country. It is to remove a narrow rim of bark immediately after the buds begin to swell in the Spring, from the limbs required to bear. This is done at a distance of 2 or 3, to 8 inches from the base of the limb, according to its size, and is speedily performed by passing a sharp knife entirely around the limb in two places, say one quarter to three eighths of an inch apart, and with the point of the knife, remove the bark entirely to the wood, but not cut into or disturb that. Mr. Thompson says in the *Kentucky Farmer*, that a limb thus prepared, which was less than one fourth of the tree, yielded 5 bushels of fair and well filled apples, while all the remainder of it bore but one bushel of small indifferent

ones. This increase in the product of the fruit, from the above practice, is what we might certainly look for, from a knowledge of the laws of circulation before stated. The crude and undigested sap passes up through the alburnum or sap-wood, and is elaborated and prepared for use by the leaves, and then takes a downward course ready to be appropriated either to the formation of new wood, or maturing and giving weight and fulness to the fruit, as the habits of the tree may dictate. Many trees, and all occasionally, are indifferent bearers, and the elaborated sap, passing by the embryo, or newly forming fruit, proceeds downward in the process of forming additional wood, or it may be, all the way to the roots. But as the downward sap passes along between the bark and wood, by removing the bark this is arrested, and it is thus forced to enter into the fruit for which it is now every way adapted. The small space denuded of bark is soon re-covered, and a similar process may be subsequently required on the same limbs. Some conjecture a like result is partially attained, when the branch forms an acute angle with the trunk below it, as the close approximation of the bark to the wood checks the rapid transmission of sap, and in this way disposes it to the formation of fruit. However this may be, well lopped trees are generally prolific bearers. We should be careful in adopting the experiment, not to use all the limbs at once, and we may look for a feeble growth, or no growth of wood at all, as the necessary consequence of diverting its necessary aliment to the exclusive formation of fruit.

R.

KENTUCKY FARMING.

We recently had the high gratification of a tour through a part of Kentucky, and as the course of cropping and some other things in this beautiful state, are quite different in many respects to the system prevailing in this latitude, and as it presents the oldest and finest example with which we are acquainted, of South-Western agriculture, we have thought it might not prove uninteresting to our readers at the North, to give them a short summary of it—leaving more particular notices of the different stocks and some other matters that fell under our observation, to be detailed as we can find room in our columns hereafter.

A portion of Kentucky has been celebrated for its fertility in sustaining large herds of buffalo, elk, deer, and other wild game, from time immemorial, by the Aborigines of the Ohio and lower Mississippi vallies; so much so indeed, that no one tribe was allowed by the others to occupy permanently here, but it was kept with a rigid jealousy as a neutral hunting ground for

all the tribes of this extensive region. This also was their general battle field, where their disputes were settled by recourse to arms, thence its name among them, of the "Dark and Bloody Ground." These meetings at times must have proved very sanguinary, as whole masses of human bones are occasionally turned up by excavations, that show a destruction of savage life in years gone by truly appalling. Nor was it won from the Indians by the ancestors of the present high spirited occupants of the soil, without many a desperate and bloody struggle, and the chronicles of Kentucky, whenever they come to be fully and graphically written, will exhibit a series of events abounding in incident and peril, scarcely inferior to the wildest tales of poetry and romance.

The country is peculiarly attractive within a circle of some 40 or 50 miles average diameter around Lexington, and, considering the softness of its climate, the fertility of the soil, and the general adaptedness of the state to the production of grass, grain, and roots, and the consequent easy sustenance of all kinds of domestic animals, it may be pronounced one of the most fertile and eligible agricultural districts upon the globe. In a careful and minute analysis of this soil by the very able professor of Chemistry and Pharmacy at the Transylvania University at Lexington, Dr. Peter, it is found to be much like that of the celebrated alluvium of the Nile, and though it has not like that the advantage of annual fertilization by the overflow of waters, it possesses others scarcely inferior. The soil here will bear severe cropping for a series of years, without intermission, of corn and other exhausting products, and when slightly deteriorated, by sowing it down two or three years in rye, clover, or grass to be fed off by stock, it is apparently restored to its original fertility.

That part of the state bordering upon Virginia, is broken, wild and mountainous, but when put under cultivation it is found reasonably productive, and we have no doubt some years hence, it will become celebrated for its flocks and herds. It has two months less winter than the mountains of the extreme Northern States, and possesses a superior soil, and yet so entirely has this fine region been overlooked, that land in any quantity can be had there, from 5 to 25 cts. per acre, and even within 50 miles of the Ohio river, whole sections may be purchased from 50 cts. to \$1 per acre, that would make the best sheep pastures.

THE CROPS of Kentucky are hemp, tobacco, grass, roots and grain, and latterly, some attempts have been made to produce wine and silk, and we have no doubt, in both of these last, she may succeed as eminently as she has in the first, and make them important sources of her wealth;

for she evidently has a fine climate and soil for their production.

HEMP has now become a very important crop here; the dew-rotted, answers admirably for bale rope and cotton bagging, while Government, in its manufacture of cordage, gives a decided preference to the water-rotted article of Kentucky, over that of any foreign importation; and now that vats for clean, warm water are easily constructed to rot in any season of the year, and simple machinery is introduced for breaking and preparing it for market, there is no doubt but the South-West will not only soon drive out the foreign article, but eventually become a considerable exporter.

WHEAT is pronounced a very uncertain crop here, especially on the richer soils, where it finds many enemies to contend with, such as the fly, rust, and mildew. Some think that the State is too far south for profitable wheat production, and they will have to give up the growing of it except for family purposes, to their Northern neighbors. But in this opinion we think there is an error, since very fine crops are produced in Mississippi, at 5° lower latitude, and so far from thinking of abandoning the production of so indispensable an article for bread, we hope that the intelligent minds of Kentucky will set themselves to discover the cause of these devastations, and a remedy for them, which may be possibly found in a preparatory steep of some kind for the grain just before sowing, or some properly prepared top dressing on the ground during the autumn, or early spring's growth.

When it is too thick and rank in the spring, to lessen the growth of straw, and increase the product of the grain, it is recommended to feed the whole field down a week or two with stock.

RYE succeeds well here, and is grown mostly for early spring pasture. It is usually sown in the corn fields, at the rate of two bushels to the acre, during the month of August, and if the corn stands up sufficiently straight, it is covered with the shovel plow, but such a cultivator as is used at the North, we are confident would prove a faster worker, and much more perfect instrument for this purpose. If the corn is too much lodged to plow in the rye, it will generally catch, though not so evenly and well as when it can be slightly covered. If it has received a good autumn growth, young stock and sheep may be pastured on it all winter, when the ground is frozen sufficiently to prevent poaching; and as soon as the field is dry in March, they are again turned on and kept there till the 10th to 20th April, according to the season, by which time the clover and grass pastures are sufficiently advanced to receive the stock. They are then taken off and the rye

allowed to grow up, and as soon as ripener hogs are turned on it. These continue till corn is sufficiently forward to commence the fattening process, they are now removed from the rye, and enough being left for seed, it again commences growing up for pasture, or it is plowed in as a fall dressing for the succeeding year's crop of corn.

OATS do well here; *barley*, *buckwheat* and *millet* have only been partially cultivated, but we believe always with fair and certain success. They answer as an excellent change of feed for hogs to run on the same as rye, and are also fed to horses.

PEAS are scarcely ever sowed as a field crop, at which we are very much surprised. They would probably produce as well in Kentucky as in New-York, where the product in bushels is generally equal to that of corn, the labor of the cultivator much less, and we think them more nutritious for hogs. *Peas and barley* are the heaviest feed given to swine in England, and make the finishing in the fattening process. Some are now recommending the cultivation of the *English bean* for the same purpose as peas. we are only apprehensive that the summers may prove too hot and dry for it, but perhaps it will soon acclimate itself, and as it can be sown broad-cast and harrowed in and needs no after cultivation, an experiment on different soils is well worth making. The northern white *bush bean*, we are certain, would do well in Kentucky, and may even be planted among corn as is usual here, or at the South as they do the cow-pea.

ROOTS, with the exception of the Swedes turnep, they have been very successful in cultivating, till the last year, when clouds of grasshoppers, blister flies, and other enemies appeared, eating off the leaves of beets and other roots, and even devouring such coarse herbage as the vines of the potatoes. It is desirable that some remedy should be discovered for the protection of the root crops, as the beets would answer well for fall feeding, and a turnep that grew *wholly beneath the ground*, we are confident, in so wild a climate, would keep all winter, and could be pulled for stock during the broken weather, and answer also for early spring food. But perhaps the Jerusalem Artichoke, upon the whole, may be considered their best root, especially for stock hogs. Turned to a field of these in the fall, they will get a good subsistence all winter, with the addition of a little corn fed to them when the ground is hard frozen, and the preparation of the ground from the rooting of the hogs is the best possible cultivation for the succeeding year's growth. We are not sure but this root is better suited to the climate of Kentucky, than any other that can

be introduced from Europe or the Northern States.

THE MAIZE, OR CORN CROP, however, should remain as it now is, the chief product for wintering the stock of the South-West. The gourd seed grain, with a stalk growing 10 feet high, is their best variety, and with easy cultivation on good lands, 50 to 100 bushels are produced to the acre. With a little extra attention, enormous products have lately been realized, averaging 140 to 200 bushels to the acre in large fields. As soon as the ears are well glazed, and the lower leaves of the stalks become dry, the best husbandry is to cut up the corn within a foot of the ground and shock it. By this time the stalks are sufficiently dry to escape moulding, and cut thus early, more saccharine matter is preserved in the fodder. It is more nutritious too, and easier masticated by the stock, and, according to careful experiments, this course is found to produce a larger yield of grain. During the winter the corn is husked and cribbed, and the stalks carted to some adjacent pasture field and fed to the horned stock in place of hay. A more careless manner of feeding is pursued by others, not cutting up the corn at all, but turning droves of fatting cattle into large fields, to be followed by hogs to eat up what passes whole through the cattle, or is thrown down and trampled upon the ground. If rye has not been sown among the corn for spring pasture, and if the field is not destined for corn again the succeeding year, as soon as it is cut up and shocked in September, it is sowed to wheat, and where the corn shocks stood during winter, is sowed in the spring to oats. This last system, however, is so wasteful that it is now nearly abandoned by all good farmers, and some even instead of feeding their corn whole to the hogs in the ear, have mills for grinding it, cob and all, and then mix it up with water and let it ferment before feeding. Where the proper conveniences exist, we have no doubt, the extra labor in doing this is more than compensated by the saving of grain, even at its present low price.

BLUE GRASS.—The great boast of Kentucky is her blue grass pastures, and of these, she certainly has great cause to be proud. It is grass that admirably suits the climate, and this fertile, calcareous soil, clothing it with the richest and most nutritious feed, and when left from the month of August to grow through the autumn, it attains sufficient height before cold weather sets in to protect itself, and thus grows on all winter, affording the stock turned upon it, except when covered, as it will be occasionally for a few days, with snow, all the food they may want to keep them in good heart till spring.

PARKS.—As the country was cleared up, the

settlers had the good taste to leave what they here call woodland pastures, that are made by merely underbrushing among the original forest trees, and sowing the ground to grass. These lend a sort of grandeur and relief to the landscape, giving it great beauty and variety, and equal in appearance, to the noblest parks of England. They protect the cattle from the cold blasts of winter, afford them a grateful shade in the summer, and preserve the grass green and growing during the hot season, causing the pastures to produce more than grows in the open fields that are left entirely open. Groves also of the Locust are allowed to grow up for the same purpose, and to furnish timber for building and fencing stuff.

STOCK.—HORSES, MULES AND CATTLE. We doubt whether there is a district of the same size that can make a superior show of fine stock than is now to be found in the circle about Lexington. Here there are blood horses of the largest and finest description, animals of great fleetness, power, substance, and endurance. Asses that are surprisingly large, 15 to 16 hands high, and the stock of mules from these great animals, are of prodigious power. We have seen them occasionally 17 hands high, and taking their end of the yoke quite satisfactorily, harnessed in, cheek by jowl, by the side of a great cart horse. The Short Horns are numerous and very highly and finely bred, and have added great wealth to the state. They find with this superior race of cattle and its crosses, that they can bring a beast to market of as great weight at four years old, as they formerly were obliged to wait 7 or 8 years for, which is certainly no inconsiderable saving of time, and adds largely to the profit of beef raising. We should be glad now as Kentucky possesses some of the best milking families of the short horned tribe, to see her pay a little more attention to the dairy, for she certainly might greatly excel in this line, and produce butter and cheese as cheap as can be done at the North. High crosses of the short horns upon the native stock, have turned out some great milkers. We have been informed that one cow on the best of clover and blue-grass pasture, without other food, averaged 41 quarts of milk per day, for three weeks, and others in winter on hay and corn fodder, gave from 20 to 26 quarts for three months in succession.

SHEEP.—Kentucky can also boast some fine flocks of Sheep, and the growing of Wool now is considered quite profitable, and the only objection to increasing their flocks, is the liability of their being killed by dogs. We believe that the apprehension from dogs, has been one of the greatest hinderances to the spread of sheep husbandry throughout the West, thereby incurring a

loss to this fine section of country, of millions annually. If all other guards failed of protecting sheep, we would recommend sending to Spain for some Alpine mastiffs, such as are used there to guard the flocks against wolves. Three of these large animals would be sufficient to protect a thousand sheep, and woe to the dog, however powerful he might be, that came near them.

AGRICULTURAL SCHOOLS

Should at once be established throughout every State in the Union. We know of no appropriation that can be made by our Legislatures, that would render greater benefit to the country at large. And by *schools* we would mean to be understood in the most comprehensive sense of that term. These should be large and commodious buildings, either erected by the State or permanently hired, at convenient points, where not only Natural Philosophy and Mechanics, Chemistry and Geology should be taught, with their application to buildings, implements, manures, and vegetables; but where also, all varieties of soils, and the best farming tools of every kind should be collected, their principles thoroughly explained to the students, and practical lessons taught to every inmate. What an army of *agricultural reformers* we should soon have scattered over the land! What a tumbling there would be of the rickety implements and no less rickety systems, or rather want of all systems, in many that call themselves farmers now-a-days!

Let not our sober minded readers apprehend that we are running wild on this subject, or conceive there is any patent way of producing crops or raising cattle without toil and attention. But what we claim is, that by using a plough made on a right principle, we can do twice as much work in a day, as with another made on no principle. That by using certain kinds of manures on certain kinds of soils, twice as great crops may be obtained as by their misapplication, from an ignorance of chemical and geological science. That by the adaptation of proper seeds and a proper mode of cultivation, twice as much may be procured from the land when prepared for a crop, as by cultivating improper seeds; and finally, by feeding the crops to the right kind of animals, twice as much meat may be made, as from being fed to Pharaoh's lean kine. If we multiply all these two's together, we have eight; and this ratio, of eight to one, is just about the difference we see in the progress towards wealth made by the skilful and ignorant farmer.

Will our Legislators do something for the community, themselves, and posterity, in this important matter?

DONATIONS TO AGRICULTURAL SCHOOLS, and other benevolent objects.—We have noticed with the sincerest pleasure, a bequest recently made by the late Benjamin Bussey, Esq. of Boston, of nearly \$200,000, his late valuable residence in Roxbury, for the purpose of founding an agricultural school, and imparting information on agricultural subjects generally.

Here, then, we have the first practical, efficient movement towards establishing an agricultural school in the United States. It has been left to a private individual to take the first step in this important work, that should have been taken by our State Legislatures years ago. But in the absence of public munificence for this object, which from all appearances, is likely to continue, it becomes a matter of *private charity*, and as such, is as equally deserving private regard,

as most of the charities of the present day. When shall we have an opportunity of recording a similar appropriation from some of our New-York millionaires?

We must here be allowed a remark, not for the purpose of indulging in invidious or disparaging comparison towards others, but for the sole purpose of rendering justice where it is due. We have often regarded with admiration, the continued and large donations and bequests of citizens of the old Bay state, the ever glorious Commonwealth of Massachusetts, for the promotion of science, and literature, and religion; and all the varied objects of charity, and the alleviation of the thousand ills that flesh is heir to. This is not the place to specify them, nor should we have room if inclined to, for their name is Legion; but we should be gratified to see a list of these, with names, dates, objects, and amounts; which, if furnished in detail, would exhibit the noblest array of philanthropy and munificence, the world has ever shown. We remember to have seen some years since, a statement made *ex cathedra*, that the total of appropriations for the above objects made by citizens of Boston alone, exceeded \$1,000,000 annually.

Individuals who make these appropriations, are generally speaking, the best fitted to superintend and carry out the *general plan* of their benefactions; and to illustrate our meaning let us cite two or three examples. The late Stephen Girard, of Philadelphia left millions to endow an Orphan Asylum, for the support and education of the friendless and destitute. From the moment of his death, which occurred six or seven years since, more than \$2000 a week or \$100,000 a year, in actual cash, was accruing on this fund, yet up to the present moment, what has been the result? The amount of income rigidly and economically applied to the object, would have given ample support to *one thousand* individuals from the moment of his decease for all time to come. Will any of our Philadelphia friends tell us how many, up to the present time, have received the benefit of this more than princely endowment? Our impression is, that few, if any, have thus far, of the *poor and destitute*, been the recipients of this bounty. We know that a board of a *building committee* was promptly organized, which, with directors and other managers, have consumed some \$20,000 to \$30,000 a year for the mere *headwork* for the construction of the Orphan's House! How much of this vast expenditure would have been saved to these little sufferers, had Girard himself, with all his practical good sense and efficient action, directed this object! He failed to perceive, that in his mode of giving, he endowed the *scheming and the affluent*, perhaps, more liberally than the friendless and destitute.

In connexion with this example, let us mention two others, the first of which is in strong contrast with the one just cited. Some years since, a lady, single handed and alone, and without any pecuniary means of her own to assist her philanthropy and strong practical good sense, procured subscriptions from benevolent individuals, to erect a plain, but substantial brick building, about 80 feet long, 50 feet wide, and six stories high, in South Hadley, Mass., the object of which was to furnish instruction to young ladies of moderate circumstances, who wished to become fitted for teachers. The total expenses of their education consisted in the *first cost* of the provisions, which they cooked themselves; fuel, their necessary books, and a trifling sum for tuition in the higher studies; all the lower branches being alternately taught by the more advanced; the total sum required per week, but little exceeding one dollar each. When passing there last season we noticed with astonishment the enlargement of the building, by the addition to one end, and two

large wings, increasing it to more than double its original capacity, every part of which is occupied by the scholars. Here then, we have a great practical benefit, the furnishing annually, perhaps 50 or 60 teachers, every way suited, by their peculiar training in habits and acquirements, to disseminate in the cheapest manner, the blessings of education throughout the land. Will the millions of Mr. Girard effect more for the community when all the plans of his administrators have come to their fullest maturity, than has been already accomplished by this almost unaided individual?

One other instance, and we have done. The illustrious Fellenburgh, on coming into possession of a handsome, though by no means extravagant patrimony, determined at once to begin the application of it to practical purposes, without waiting its accumulation through a long life of, it might be, doubtful success. With this view, he immediately established his agricultural and other schools at Hofiwyl in Switzerland, and became himself the teacher and superintendent of the pupils, and placed *his daughter* at the head of the female department; and through a long series of years has he, from his own resources, conducted this establishment, rendering more benefit to his country and the world, than any other institution, endowed by successive generations of his countrymen, had in the same time effected.

The moral we wish to educe is obvious. Those benevolent individuals of our own state and country, who intend to bequeath large sums for the benefit of the community, (1) will secure the object of their intended benevolence most effectually, by at once applying their funds to this object, instead of incurring the hazard of their accumulation or safety, in this age of Bank explosions, and Trust delinquencies, or chancery and executory application; and enjoy while living, the luxury of witnessing the effect of their self-directed bounty.

R.

Tour in England. No. 3.

HISTORY OF THE BERKSHIRES.—Arrived now in the heart of old Berkshire, the public will probably expect to see some account of the early history, the breeding, rearing, and treating of the celebrated animals to which this county has given a name. We very much regret, that we had not more time than was at our command, while in England, to fully elucidate this subject, as well as many others of great interest to the agricultural community, but hope at some future time we may be able to accomplish this satisfactorily. But what few facts we at present have at command, are probably about all that the generality of readers will care to know. We shall therefore proceed to state them as succinctly as possible, and trust that they will be considered sufficient without obliging us to again refer to the subject.

We traversed this and the neighboring shires of Hants, Wilts, Oxon, Bucks, and Surry, in those directions where it was thought important to do so, and were generally attended by stock purchasers in our rambles, who were perfectly conversant with the whole breeding of this region, and we think that we were as thorough and indefatigable in the search after Berkshires,

of the best breeding and quality, as the circumstances of the case would permit, or perhaps was of any particular benefit to the public or ourselves.

All who pretended to any positive knowledge of the subject with whom we conversed, agreed that this breed of swine originally was a large and rather coarse animal, of a white or buff color, intermixed with black spots, and that they were improved to their present great perfection of form and dark color, by the Siamese or China boar. One quite intelligent respectable old gentleman, of a handsome estate, residing at Southbridge, twelve miles from Reading, with whom we conversed, distinctly recollected about fifty years ago, when small prick eared black boars were brought into his neighborhood to refine their large hogs; but Mr. Westbrook of Bysham informed us, that his father possessed them in great perfection sixty years since, of a dark rich plumb color, mingled with a little white. He (the son) however, had suffered the stock left him to breed in and deteriorate so much, that we thought it not worth purchasing from; but another person, who had of it some years ago, and who had paid good attention to it, allowed us to choose two of his finest sow pigs of this family and color, perfect almost in form, and of a good large size.

From Bysham they probably gradually found their way along up the Thames, and to different parts of the county and its neighborhood. At Reading they told us that they had known them only for about forty years. When we wrote our "Chapter on Swine," that appeared in the Cultivator some two years since, it was on the authority of different friends who had resided in the south and west of Berkshire, Professor Low and some others, that we asserted that the improvement began about the year 1800, but it seems that our informants only knew of it in their quarter at that period, and that it is now distinctly traced by Mr. Westbrook as far back as 1780. We are rejoiced at this, and hope it will be possible to go still farther hereafter, as it will only make the breed the more valuable in our estimation, as showing that it has a long established character in general excellence and pedigree, unknown to any thing of the domestic kind, the Asiatic hog alone excepted.

The Berkshire is now generally acknowledged to possess more good points in him than any other breed whatever, as he is of the largest profitable size, of the truest and best shape, and has the most symmetrical limbs, and superadded to these, joins what is rather remarkable, fine thin hair and soft skin, to great hardiness and constitution. They are prolific breeders, the

best of nurses, of thrifty growth, early maturity, easily kept on grass, the coarsest roots, or bran and brewers grain, and *will fatten at any age*. Their dispositions also are very quiet, unless roused to a fight, and then like all well bred animals, are game to the back bone.

Their powers of endurance are very great, and nothing in England can travel with them of the hog kind, as has been often proved in driving the different stocks to fairs and markets, side by side. We took great pains to obtain evidence on this important point to the western farmer while abroad. Joined to all the above good qualities, their meat is of the best kind, the hams, shoulders, and jowls, being lean, muscular and delicate, while the side pork is very fat, and cuts clear of lean as the Chinese, thus making the heaviest mess pork for barreling, and such as is most preferred at the eastern markets. We saw hundreds of bacon sides in England, and since our return to America, have frequently witnessed the cutting up of Berkshires where the fact of their making clear pork was disputed at the packing houses of Cincinnati and other parts of Ohio. Again, notwithstanding their dark color, whether their hair be singed off by burning as is usually practiced in Great Britain, or scalded as in the United States, the skin dresses of the purest and most delicate white, and nothing in the slightest degree dark can be detected at all in it but the roots of the hair, to which the most fastidious stickler for white in a pig's skin cannot object.

We found the Berkshires more sought after in England than any other kind of swine; they were not only taking them into Scotland and Ireland, but France, Germany, and other parts of Europe, and the British colonies in every direction, not even excepting Australia, some 8,000 miles distant from the father land.

They are freer from disease than any animal we know of, and are never cursed with that sickening scabbiness of the skin, that characterizes so many other breeds.

In breeding, those of medium sizes and fine points are most sought after in England. Ten to fifteen score (200 to 300 lbs.) are the maximum weights desired in Berkshire, and we were often told there, that they considered these the best and most profitable sizes for them. From this opinion, many breeders in our country dissent entirely, and though we would generally recommend those of a medium size to be wintered over, still if a spring pig will fatten kindly as he is growing, and can be made to attain 250 to 300 lbs. by the following December, it saves wintering, and may be considered upon the whole the most profitable breed. It is contended that the largest and finest Berk-

shires will easily do this, and several breeders have now commenced a series of experiments with the produce of our late importation, for the purpose of testing whether it can be done, and we are promised a full report of the trials as soon as completed.

All colors exist in Berkshire, stragglers occasionally finding their way in there, but they are not recognized as their breed at all, the *true sort* being of a black, or deep rich plumb color, with a slight flicking of buff or white on them, the feet generally white, with a small white strip in the face, and frequently a white tuft at the end of the tail. White hogs exist in considerable numbers in the neighborhood of Windsor, of tolerable fair quality. They are called old King George's breed, and are said to be the descendants of some Leicesters given the late George III. by the celebrated Bakewell, for the purpose of stocking his Majesty's farm near by. They are now much deteriorated in breeding, and totally unworthy, in our judgment, an importation.

Great care is requisite in purchasing Berkshire hogs, especially on the borders of the county, as the Neapolitan, Hampshire, Wiltshire, and various other crosses exist, that none but the best judges in breeding can detect, and many of the farmers are exceedingly careless in their selections and stock animals, and some are totally indifferent whether they are pure blood or not. As to their cost, this is according to fancy in a measure. Those who had taken particular pains in their selections and breeding, for picked stock asked high prices. All sorts of meats are at present scarce, and very high in England. Good pork was worth 12 to 14 cts. per pound when we were there, and the poorest pig of any breed, two to three months old, would bring in market as a stock animal, \$4 to \$8 each. Two years ago, they were not worth half that. But the first cost is nothing in comparison with other expenses, which are almost innumerable; we will merely state one item. By the London packet ship Mediator, we shipped two grown animals and eighteen small ones, about three months old. Mr. Whyte's bill of feed alone for these was 34*l.* 1. 6, which at the then rate of exchange, amounted to over \$160. To be sure, we were liberal in laying in sixty days supplies for the stock, as we had no idea of paying a high price for animals, and then have them starved to death on the voyage. As near as we could estimate the cost of four months' pigs, including accidents and deaths, laid down in this city, it amounted to about \$50 per head, without reckoning any thing of our time employed in the selections, so that the reader will see that there can be no very great profit in importing Berkshires, at the prices we

sold them at. Indeed, we had no idea of making money on them from the beginning, our sole motive in the importation was, to secure *superior fresh crosses*—whether we succeeded or not in doing so, as the animals are now here, the public can judge for itself; further than this, it does not become us to speak. Certain it is, however, that we took unwearied pains in the selections, and went down to Berkshire no less than four times to do so. We chose from all the largest and finest families that we could hear of, and if the animal suited us, we never hesitated at the price named for it. Others may import at a less cost than we have, but if they have obtained larger and finer animals, we shall be happy to be advised of the fact. We hardly think that England can at present add further improvement to our stock of swine in this country, and if any more importations are wanted, we would recommend obtaining them from China, Siam, and the Asiatic Islands.

We trust we shall be pardoned so many words on a subject in which it is well known that we have had a pecuniary interest, for we assure our readers that we have been literally compelled to do so, in consequence of the almost innumerable questions and letters that have been addressed us upon it. We fully believe what we assert, and, as we have paid particular attention to this subject, we express ourselves frankly, strongly, and fully, and exactly as we think. To all those who do not agree with us in opinion, we cordially invite from them an expression of their sentiments, and more especially a statement of facts in favor of any other breeds of swine, and they may be assured that they shall have a full hearing in our columns. We go for the great *general* good and improvement of agriculture, without regard to the private interests of any one man or thing.

A.

PEDIGREES.—It is found troublesome and perplexing, in reading the pedigrees of animals, to ascertain how many crosses they had of certain stock, without continually counting the g's which stand for great, great, grand dam, and so on. Now, instead of this perplexing repetition of g's, which it is impossible to repeat in speaking, and convey any definite idea, we recommend placing figures for them, thus, suppose that we wished to give the pedigree of the cow Minerva, by this method we should say:—

Minerva, calved May 6th, 1837, by Jupiter (244), dam Ora, by Saturn (230), d. 2 Latona, by Orcus (221), d. 3 Juventa, by Ajax (215), d. 4 Lais, by Memnon (210), d. 5 Fulvia, by Pan (199), d. 6 Siren, by Pluto (168), d. 7 Styx, by Charon (143).

Present method in the Herd Book:—

Minerva, calved May 6th, 1838, by Jupiter (244), dam Ora, by Saturn (230), g. d. Latona, by Orcus (221), g. g. d. Juventa, by Ajax (215), g. g. g. d. Lais, by Memnon (210), g. g. g. g. d. Fulvia, by Pan (199), g. g. g. g. g. d. Siren, by Pluto (68), g. g. g. g. g. g. d. Styx, by Charon (443).

In reading the proposed method, we should say, Minerva, calved May 6th, 1837, by Jupiter (244), dam Ora, by Saturn (230), dam second, Latona, by Orcus (221), dam third, Juventa, by Ajax (215) dam fourth, Lais, by Memnon (210), and so on.

This strikes us as much more simple and definite than the old way, and we hope that the committee of gentlemen, appointed to superintend getting up the American Herd Book, will take the subject into consideration, and in the meanwhile, all those who approve the suggestion, can adopt it hereafter in stating the pedigrees of their animals.

A.

THE FARMER'S REGISTER.—Edmund Ruffin, Esq. for ten years the sole editor of this able agricultural paper, announces his intention to abandon its publication at the expiration of the present volume. The causes assigned are two—1st. The hostility of the Banking interest in the state, whose wrath has been kindled by his uncompromising exposition of their mal-practices, the propriety of which may be learned from the simple statements, given in the April No. It is there charged, that there is an existing partnership of Banks and State, in this wholesale fraud, and that Bank directors and members of the Legislature are largely indebted to the Banks. Proof—Fifty-five members of the last legislature of Virginia, owed the Banks \$111,675, and the Bank directors, *so far as reported*, are indebted either as principals or sureties to the Banks, to the moderate amount of \$2,321,080, or about one-fourth of the whole Banking capital of the State. In two Banks, the boards of directors owe nearly one-half the amount of capital, and in another, which might teach a lesson of *thrift* to some of our New-York or Michigan bankers, who have proved themselves anything but *green* in these operations, the directors absolutely owe the Bank, *over one-third more than its entire capital!* And, to show the pecuniary interest these worthy individuals have in the prosperity of the institutions under their special charge, of twenty-one directors constituting the boards of three Banks, four have little more than stock enough to entitle them to hold office, while the remaining seventeen have not a spare share a piece, over the five necessary to their holding their posts.

But the great point that is made against them is, that while the Banks are expanding, and the legislature have acceded to suspension, for the purpose of enabling them to place themselves in a position to resume, they have during the past year, from January 1, 1841, to January 1, 1842, increased their liabilities and decreased their specie to the amount in the aggregate, of over \$1,000,000! and this is the result of a five years' suspension!

We are not *bullionists*, and far from being of that school that would attempt to interdict the circulation of Bank paper, believing that Bank paper convertible into specie, is the best currency in existence, or that has ever had existence. Neither do we believe that

Banks may not in some great contingency, such as occurred in the spring of 1837, require a breathing time to look around them and prepare for a new and difficult condition of things; but, as with the Northern Banks, a few months are sufficient to enable them to prepare to meet their engagements, and at the expiration of this time, they should be *compelled* to meet them or go into liquidation. The last five years are rich in lessons of wisdom on this head, and how infinitely better to the community and themselves have been the effects of resumption by the Banks of the North, instead of continued suspension as in the South and West. But we are exceeding our limits on this subject. It is for this great crime, of exposing the chicanery and tricks of the Banks, this faithful watchman of the *Farmers'* interests, is to be sacrificed.

But 2d. He says: "The great and unceasing and all-important obstacle to the proper maintenance, and consequent full measure of utility of the *Farmers' Register*, is the general apathy and want of all public spirit, and *even of enlightened self-interest*, by the agricultural community of this state. The proportion of the agricultural class of Virginia is amazingly small, who participate in the generous feelings expressed by one who merely feels and thinks as every member of that class should do, and would do, if true to their own and their country's best interests. The pecuniary support afforded to this publication has never been enough to compensate the editor for the risks and losses necessarily incurred; and for the last few years, there has not been enough of clear profit to pay for a capable clerk. Nearly half the actual support of subscribers is furnished from beyond the borders of Virginia—and the arrears of subscription now due, and of which the payment is desperate, amount to more than all the clear profit ever derived from the adventure. Under such circumstances, the work has been continued less in regard to any hope of its being properly sustained, than for other considerations. But with the close of this volume will end the editor's labors for ten of the best years of his life; and he will no longer obtrude, on the agricultural public, services which seem to be so little appreciated, and which have been so little aided by the sympathy of the great body of the members of the interest designed to be served."

Here is a lesson that may well make the farmers' advocate hang his head with shame. The shades of Washington and Henry, of Marshall and Madison, will frown indignantly on the degenerate cultivators of their once proud Commonwealth. But Virginia is not alone in her want of enlightened and patriotic efforts to improve her soil, and sustain progressive advancement in agriculture, as the unrequited efforts of many of its best friends have abundantly proved throughout the whole Union. Yet we hope and trust, we are not *hoping against hope*, that a brighter day is dawning, and that farmers will ere long know and appreciate their *true* friends, and will reward those who have done, as well as those who may be "doing them a more essential service than the whole race of politicians put together."

PROTECTION OF HOME INDUSTRY.—Our object in alluding to this subject, in the last and present number of this purely *agricultural journal*, is simply to disabuse the farming community of the false hopes they may still entertain, of supplying Europe with our agricultural productions. We have shown that there is less of beef and pork exported from this country now than fifty years ago, and that even the small

amount of grain and flour we continue to send to Europe, proves a serious loss to those engaged in it. We now propose briefly to show from the temper of the English sentiment on this subject, and the general condition of the laboring portion of Europe, that any future *essential* change of policy in our favor is hopeless. In exhibiting English public opinion, we shall quote from the *London Farmer's Magazine*, an ably conducted periodical, and the most popular mouth-piece of the farming interest, which *is the controlling interest in England, as it should be here, and will inevitably be, whenever it takes the trouble to make its voice heard.*

In the January number, in speaking of this country, it says, "To employ a portion of their surplus population in cultivating the banks of the Ohio, is an object of immense consequence to their future prosperity; but this advantage cannot be obtained, unless the inhabitants of the British empire consent to abandon the tillage of many millions of acres at home, and draw their supplies of food from foreign nations. We see not the improvement of our present condition, by working in mines and exposing ourselves to furnace labor, in exchange for American flour and Ohio salted beef. The value of agricultural produce in British America (Canada) is very considerably interfered with by clandestine importations from the United States." This trade it is strongly recommended to cut up by the roots, but the British shipping interest in this instance, happen to have the longest end of the lever, and the National government leave this thing to them for the present, to the small detriment of the farming interest at home, and the great annoyance of the colony. But colonies, with our politic old mother, to our own cost we know, are loved and cherished for the amount of money they can earn for her, not the trouble of defence and protection they require. They have however added largely to the duty on flour now passing into Canada from this country, and as soon as it is any object to raise the duty on wheat it will at once be done.

From the February number of the same journal, we quote, "The American citizens now desire John Bull to brave all the dangerous consequences of the scurvy, and to eat American salted beef for the benefit of American agriculture, instead of English fresh roasted beef. They ask Englishmen to work in mines and fry before furnaces; and in exchange for this duty, the free traders promise free born Britons, American flour and American salted provisions. But it is not possible to impress on our population the propriety of throwing several millions of our lands at home out of cultivation, and reducing their own countrymen to poverty and wretched-

ness, for the sole benefit of American agriculture and American field labor."

The March number of the same journal says, "The agricultural interest in America will probably require in exchange for their produce, *bullion*, with which they may extend American agricultural improvements." (We should be glad of paying our debts there, and the trifling amount of manufactures we are constantly importing from them, but are denied this poor privilege, with almost every article we export from the north. They take cotton, which they cannot do without, and rice *uncleaned*, and a few other articles from the south; and a small quantity of potash from the north.) "Surely her Majesty's subjects are not so perfectly demented, as to prefer the countless plains on the banks of the Ohio to the cultivation of British and Irish fields, nor can they be so far gone in self-respect, as to work in factories, in mines, and to destroy their constitutions before furnaces, for the supply of foreign nations with the different articles of their labor; and the pay for these toils to be their food, so long as health permits them to do their work in a satisfactory manner to their taskmasters, (the Americans,) and not one day longer." The number of April gives the opinion of the seconder of the corn law modification. He says, "*Sir Robert Peel's corn law would effectually prevent any greater quantity (of corn) coming to us from America and Odessa, than the present law allowed.*" For themselves they say, "American flour should, in a most particular manner, be excluded from our markets; its importation will materially interfere with our milling trade, and a great proportion of the quantity latterly imported from America is not genuine, being mixed with Indian corn meal, and its deleterious qualities cannot readily be detected." (We doubt if a pound of Indian meal has been mixed with every 1,000 barrels of wheat flour exported; and when sent abroad, our corn meal is esteemed a choice delicacy, wherever it goes. We have heard a resident at St. Croix the past winter, speak with enthusiasm of the delicious article he was regaled with from the Wilmington mills. But to misstate the case, and depreciate the American article, is an English way of stating an argument and securing a case.) "We cannot conceive that any British advantage can arise from this system of generosity, nor can we comprehend how that doctrine can benefit us, which for the sake of increasing agricultural cultivation in the wilds of America, would place millions of acres of land at home out of tillage."

We could multiply these extracts ad infinitum, but we think they are sufficiently explicit, to show the present temper and feeling of British public opinion towards the policy of admit-

ting American agricultural products into that kingdom. We will now state briefly the condition of the *laboring people* in Europe, from which American farmers can judge of the prospect they have of being able to compete with them in the English grain market, whenever the short crops compel them to admit it.

In Denmark, the peasantry, who are the only laboring classes, are held in bondage, and are bought and sold with the land.

In Russia, it is still harder for the serf, for the emperor and nobles own all the land in the empire, and the peasantry are transferred with the estate. They universally live in wretched cabins, sleep on the bare floor, and in the beginning of winter, have a tolerable supply of cabbage and coarse bread, scarcely ever meat or butter; but towards spring, especially if it be a hard winter, or they have had a scanty supply, or have been at all improvident, they are obliged to eke out their coarse meal by the addition of bark, and even *straw* reduced to a fine state. This *brutish fodder* produces intestinal diseases, that prove fatal to thousands on the return of warm weather.

In Poland, the peasantry are all slaves. A writer who has travelled there in nearly every direction, says, "We never saw a wheat loaf to the east of the Rhine in any part of Germany, Poland and Denmark," and he might add Russia. And let it be borne in mind, these are the countries that produce the wheat which is stored up at Dantzic and other convenient points to pour into English ports whenever they are open at all. The food of the above competitors of *American freemen* is "cabbage, potatoes, and sometimes black bread and gruel without the addition of butter or meat."

In Austria, the nobles are the proprietors of the land, and the peasants work like our slaves, every day throughout the week for their masters, except Sunday.

In Hungary, it is still worse, for the peasantry (the slaves) do all the work, pay all the taxes, and have soldiers quartered on them at pleasure.

In France, eight millions never eat wheat bread. Their food is barley, rye, buckwheat, *chestnuts*, and a few potatoes. The average wages in France is \$37 50 for a man, and half this for a female for the year, and one-fifth of this amount is taken from them by taxes.

In Ireland, the average wages are 9 to 11 cents a day; and last of all, in England and Scotland, among a large class, they receive but just enough to keep soul and body together, and for the last year, if their own pitiable accounts are to be taken for truth, thousands have died from hunger and disease, consequent on their privations.

Such then, farmers of the United States, is the class of people you are to come in competition with, whenever you send your productions abroad for a market. But this is not all. You have two other items to contend with. The first is, transportation to their shores, from an average distance of 1,000 miles from the interior of your own country, and then across the Atlantic 3,500 to 5,000 miles further. But this difficulty and expense, the indomitable energy and resources of our countrymen could grapple with—but a greater one yet remains behind, and in this we must inevitably be worsted. European exactions are an over-match for even Yankee skill and perseverance, though the latter is unequalled by any thing else. We have then the enormous customs or duties to pay in foreign ports, and to give you a slight idea of what they are, and nearly what they *always will be*, we subjoin the impost on some of the principal items of export, to the principal countries with which we trade in Europe.

Cotton being an article they have not hitherto raised, it is admitted at a small duty by all Europe; generally at less than one cent a pound, and in some cases, as in Prussia, it is free; but as by manufacturing, they can make three times as much as we in producing it, there is little credit due their liberality on that score.

The following table shows the duties levied on the articles enumerated. The *sliding scale* being adopted both in England and France, to regulate the duty on Grain imported into those countries, the rate of duty may vary every month, increasing as the price of grain or flour falls, and vice versa. No later authentic information of the rates actually paid, have been received than the close of the year 1840, but those of 1841 will not vary materially from those of the preceding year.

ENGLAND.

Flour, per barrel,	paid duty in 1840,	\$3 12½
Wheat, per quarter of 8 bushels, do.		5 20
Corn, do. (not given in 1840) in 1838,		3 68
Rice, per cwt. in 1840,		3 60
Tobacco (manufactured), per lb. in 1840,		2 16
do. (unmanufactured), do. do.		72

RUSSIA.

Flour, per bushel, in 1838,		56
Rice, per 36 lbs. in 1842,		45
Tobacco (manufact'd), pr 36 lbs. in 1842,	9 00	
do. (unmanufact'd), do. do.	4 50	

FRANCE.

Flour (wheat), per 220 lbs. in 1840,		10 83
do. (rye), do. do.		6 60
Wheat, per 22 gals. do.		4 63
Corn or Maize, per 22 gals. do.		3 50
Rice, per 220 lbs. do.		46 75
Tobacco, per 2½ lbs. do. nearly		2 00

Austria levies a duty of \$7 20 on every 123½ lbs. leaf tobacco imported; and Prussia \$7 51 on every cwt. of manufactured tobacco, and \$3 76 on every cwt. of unmanufactured tobacco. The two last never import grain from the United States.

We have given above the figures; we shall leave it for our readers to determine, how desirable a trade must be to us, carried on at a distance of five thousand miles, and paying an average duty *a good deal exceeding one hundred per cent.* And this, be it remembered, is after carrying into the account 700,000,000 pounds cotton, exported last year, and paying but a trifling duty abroad; throwing of course, nearly the whole burden of duty on the other exports, the product of the country at large.

In round numbers, we pay on our exports, amounting to about \$90,000,000 annually, *over one hundred per cent. of foreign duty*, while the \$100,000,000 we import, we levy a duty only of twenty per cent. The *reciprocity* in this intercourse seems to be all on *one side*; yet one sided as it is, it exhibits about the fairness of trade we have ever had in Europe. Nor need we look for any material abatement of foreign imports. The selfish policy they adopt, we must use in self-defence, or be kept in our present slavishly embarrassed condition. No change of policy need be looked for abroad, till the present race of human beings are blotted out of existence, and another substituted in their place, with an intensity of love for their neighbors, as great as that now existing for themselves.

Then why do we indulge this insane policy? The motives are various. We have never been '*frightened from our propriety*,' though we have often been *gulled* out of it; and our late special treaty with France, by which her politic monarch, apparently crouching before our menace, yielded to our demand for the payment of a few millions, but first secured conditions by which she received it back ten times over. He '*stooped to conquer*.' It was an act illustrative of the race. 'Twas the old bargain over again on a larger scale, in which the countryman sold his turkey for a dollar and his dinner, but his dinner consumed the turkey and as much more with it. We received an indemnity of about \$5,000,000, and have paid them back \$50,000,000. for which we have no claim for indemnity.

But our great error is in submitting to a policy dictated by a small minority of our producing class, in their misguided expectations of promoting their own exports and profits, in the exact ratio they injure, (from excessive importation.) all the remainder of the Union. Do they not see the utter fallacy of this doctrine—that Europe buys not a pound more of cotton

for all our imports than she would without, and that in the face of all concessions, she is stimulating the production of cotton in Africa, in Asia, and the Islands of the Indian Ocean, and that they are hasting in their career as competitors beyond any thing heretofore known? The South is sleeping on a volcano; and before she would acknowledge it to herself, if allowed to pursue her own policy, Europe would be supplied with cotton at cheaper rates elsewhere, and her market at home would be ruined by the utter bankruptcy of our own manufactures. How vastly better for her to be warned in time. Let her raise less cotton, and more grain and other products. The profit would be greater and the risk less. By sending a smaller quantity abroad, prices would be higher. We believe if her annual crop were one-fourth less, the cotton grower would receive more in the aggregate for his crop than now. By stimulating production, he is his own most formidable competitor. In the mean time, our own manufacturers have been advancing, and by a judicious protection will continue to advance beyond anything the world has ever seen, and will in time afford an unlimited market for the raw material. We consume now as much as our total production twenty years ago, and an amount equal to that manufactured by Great Britain at that time. We are now only twenty years behind the greatest manufacturing nation in the world! What a destiny remains for the United States if we have wisdom to achieve it!

Circumstances at no one period of our history, have been so favorable to our growth, if properly used, as at the present moment. Owing to the distress abroad, every vessel now coming from Europe is crowded with intelligent and industrious emigrants.* Call into use the dormant capital that is now hoarded up from apprehension of its total loss; call into active operation the millions of manufacturing investments now idle and unproductive, by a sufficient and permanent *protection*, and we fix all this emigration immovably to our soil; and as much more behind, as the persuasion of those with us, and the example of their own success, will induce to follow. Though we cannot afford to carry bread to Europe to feed her industrious citizens, we offer them every facility to come here and bake it for themselves; and if we are unwilling to go there to purchase the fabrics of her artizans, we solicit their aid in making them on our own soil.

* The number of emigrant passengers that have arrived in this port from Europe, from Jan. 1 to May 14, 1842, is 15,908, being an excess of 9,338 over the arrivals during the same time in 1841. They are, generally of the best class of farmers and mechanics who for want of employment at the east, are pushing for the interior and the fertile lands in the far west.

We have seen there is no reciprocity in our intercourse with Europe. Let us give up then this phantom of *free trade*, a thing British statesmen are fond of pensioning their distinguished writers to promulgate to the world, as eminently worthy their imitation, but which they are most especially careful to eschew themselves. 'Tis a dream unworthy our waking hours. Let us cherish the operations of our own HOME INDUSTRY already commenced, and aid in developing new resources of employment and wealth. We have enough of every variety of original materials, to supply ourselves. To make use of the means already in our possession, is the most obvious, as well as the most politic course we can pursue. We have a continent to operate in—a land of surpassing fertility, stretching through 22° of latitude, and 40° of longitude, and embracing every variety of soil, climate, and production. This is almost every where well watered, and furnishing abundantly a natural manufacturing power, far beyond any other portion of the globe. And where this is wanting, exhaustless mines of coal offer their gratuitous treasures for our use. Can we be so insane as to forego all these manifest advantages at our hands, and seek those entangling alliances from the old world, the father of his country so justly deprecated? Free trade is a chimera of the brain, 'tis impossible in practice, and if possible would still result in the loss of the exchange. The sovereigns of Europe *talk* of Free trade, but they *act* monopoly. They *will have* the Lion's share. They offer us no other terms. We have been hewers of wood and drawers of water, till our patience is exhausted. We have only to resolve we will be so no longer, and our emancipation is already completed. *The people*—the people have only to tell their vicegerents at Washington that their minds are deliberately but unalterably made up in favor of *protection*, and they will afford it. 'Tis the only tribunal we can approach for this object. The states have voluntarily yielded up this right. It exists with Congress, or it exists nowhere. Let us then see to it, that they faithfully execute this trust. *It was one of the express objects of their organization, that they should foster and encourage American Industry, and defend it from European exaction.*

This done, we shall hear the notes of joy and gladness again resounding throughout the country, instead of the wail of sorrow and despair. Then shall we see the husbandman rewarded in his toil, and the artizan and manufacturer sustained in their praiseworthy and patriotic efforts. Then shall we see new and unusual products, with augmented ones already familiar. Then shall we have prosperity, abundance and contentment at home, and credit and consideration abroad.

HOEING CROPS—*Their resources for water in drought.* Corn, potatoes and other crops will require particular attention during this and the early part of the next month. There is great advantage in frequently stirring the ground, even if there be no weeds to extirpate, and especially if the ground be dry. Whoever has observed the difference in a time of drought, between crops that are neglected, and those where the ground is frequently stirred with the hoe, or plough, or cultivator, will not have failed to appreciate the great utility of this practice. By a careful attention to this, the diligent farmer often pushes his crops far enough ahead, to shade the ground and effectually protect it from the great influence of the sun's rays, by which he secures a fine crop; while the neglect of early hoeing keeps the crops backward, it may be, till the influence of the sun is sufficiently powerful to wither and destroy the crop for the season.

There are two ways in which water is furnished to the growing vegetation by this operation. The first is, by producing the unevenness which is the result of stirring the surface, the radiation or escape of heat from the ground which is imbibed during the day, goes on with great rapidity as soon as the direct rays of the sun are withdrawn; and the air, which is highly charged with moisture, in consequence of having its temperature lowered immediately in contact with the surface, deposits large quantities of dew upon the ground, which is absorbed by the vegetables. This operation is illustrated on every farmer's table during the hot weather, whenever a pitcher containing cold water is placed in a warm room. The air, which is full of aqueous vapor, coming in contact with the vessel, parts with a portion of its heat which passes into the cold body, and agreeable to the invariable laws of chemistry, it parts with a portion of the water suspended in it also. Thousands of people witness this operation every day throughout the summer, and yet never learn where the moisture comes from, which is collected in large standing drops, and often runs down in streams from the sides. These people never studied the principles of chemistry, or they would have known that in what is termed the driest weather, the air is really most full of water, held in a state of invisible vapor. We have all convincing proof of this, whenever the temperature of the air is lowered by the action of electricity, and the gathering thunder clouds make their appearance on a sultry summer's day, and anon pour down volumes of liquid air. While snugly enshroued under a shed, and rivers of water were pouring over the eaves, and the pelting storm seemed as if it would come through the solid roof, did the reflecting farmer ever ask, Whence came this deluge? A few minutes before, the heavens were unclouded and transparent as glass, and the naked eye could reach through space beyond the fixed stars—now he can hardly see a dozen rods. Whence came this world of waters? The wind has scarcely stirred the quivering aspen, and therefore could not bring on its loaded wings, this burden from the sea. A single remark explains the whole of this striking scene. The air when hottest, is most full of water, being capable of holding the greatest quantity when its temperature is highest; electricity has reduced the heat of the air, and instantaneously the lower temperature compels the air to disgorge a portion of the water it has held, and down it comes in torrents.

Now, precisely this operation is carried on when the dew falls, except that the heat is abstracted from the air not by electricity, but by radiation passing upwards through space, and into the ground when its temperature is lower than the air, and at the precise instant the temperature of the air falls, it begins to deposit a portion of its moisture, thus supplying the vegetation with water by its roots through the ground,

and by its roots and leaves, which, in consequence of their rapid radiation of heat, and becoming cold, condense considerable quantities of dew upon them.—These operations are augmented just in the proportion to the roughness of the surface and the dark color of the vegetation and ground; illustrating in this, two other principles in chemistry; 1st, that radiation is greatest in black, and least of all in white; and 2d, it is also proportionate to the roughness of the surface. A black kettle covered with soot will imbibe and part with heat in an incredibly less space of time, than will a polished white vessel similarly exposed.

We see from the above explanation, how beneficial it is to the farmer, to have his land well blackened with manure, to meet the contingencies of drought, and how his rank, dark vegetation drinks in the moisture from the air that surrounds it, while the yellow puny vegetables are incapable, perhaps, of absorbing it in sufficient quantities to save even their existence.

But the second way that hoeing the soil affords water to growing crops, is by the direct formation of water in the ground. This is done frequently in great abundance, when the soil is well charged with hydrogen by the manures, or geine, contained in it. By moving the surface and bringing portions of the soil to the air, a combination with the oxygen of the latter is effected, and water is the result, which is thus directly furnished to the roots of the plants. The amount of water conveyed by these two methods to an acre of growing crops during very hot weather, is almost incredible. But this need not be deemed unworthy of credit by the most prejudiced and least informed, when he can prove to himself by ocular demonstration, that *by burning a certain invisible air or gas, he can produce water.* Of this he can satisfy himself, by placing a few pieces of iron or zinc in a large glass jar, containing water and a small quantity of oil of vitriol. This vessel is to be closely covered and a tube inserted, of the size of a small quill from the wing of a bird. You will at once perceive a commotion in the liquid, occasioned by the combination of the oxygen of the water with the metal, for which it has a great affinity, and the bubbles are the hydrogen gas escaping upward, after its disengagement from the oxygen. This gas is inflammable, and as it issues through the tube, by applying a lighted taper to it, it immediately takes fire. This is simply a re-combination of oxygen from the atmosphere, with the hydrogen, again forming water; which is shown by holding a glass tumbler over the flame at a little distance, when the water will collect in globules or large drops. Now if any of our uninitiated readers will take the trouble to try this experiment, he will find what we say is true, from which he may infer that what we have before said, though we have not room now to prove it, is equally true. And as it is a matter intimately connected with the success of his crops, we earnestly recommend him to apply these principles to practice. We may probably elucidate this subject more fully hereafter.

We will only add in conclusion, that corn, potatoes and other crops requiring the hoe, *should not be hilled*, unless the ground is liable to excessive moisture, which it ought not to be for any tillage crop; and then a large broad hill should be made, to allow the roots to form above the too wet ground. In all other cases, experience shows that crops will yield much better without hilling than with. Care ought also to be taken, to avoid cutting off the roots in hoeing, as just so many arms or feelers for the supply of nutriment to the plant are cut off, that require time and food from the parent plant to renew, before it can enjoy the full benefit of that aid, of which it has thus been deprived.

TRANSPLANTING EVERGREENS.—June is the month in which this should be done. For this practice, we shall give our readers two substantial reasons. *Experience* has proved it to be the most proper period, as many more live when transplanted at this time, than at any other; and a knowledge of the habits of this class of trees, gives us the rationale for expecting such a result. The sap in evergreens and all resinous trees, circulates freely throughout the winter, and of course it is necessary to sustain the life of the plant effectually, that it should have access to all the nutriment it can extract from the soil, under the most favorable circumstances of the perfect adaptation of its roots to this object. The summer months is the season of the year when the roots develop themselves most fully, and when of course they can best withstand the violence of being torn from their native bed, and accustom themselves to a new situation. This operation performed at any other time, subjects them to the necessity of supporting their foliage, from the time of their removal till this period, which of course incurs the hazard of the loss of the tree. It is a judicious plan to cut off the long roots a year before removing, which stimulates the production of a great number of new roots in a small compass near the trunk, and it is these small roots, the more minute the more effectual, that afford the greatest support to the tree.

THE GREATEST RACE ON RECORD.—It is no part of our intentions, to chronicle the trials or triumphs of the turf. There may be more or less connexion with the stouter kinds of racing bloods and the *farm horse*, as there generally is with the carriage horse or roadster, and with manifest advantage to the latter. But as a general rule, we are wholly opposed to this mode of testing the value of breeders; and if decidedly advantageous as a method of proving the requisite qualities of serviceable horses, we should consider the cost in time, money and morals, far exceeding the value to be derived from it. But to the race extraordinary.

This was run on the Union Course, Long Island, May 10th, by Wm. Gibbons's ch. m. *Fashion*, by Imp. Trustee, out of Bonnets O'Blue, by Sir Charles, 5 yrs. carrying 111 lbs. and rode by Jos. Laird; and won by her against Col. Wm. R. Johnson and Jas. Long's ch. h. *Boston*, by Timoleon, out of Robin Brown's dam, by Ball's Florizel, 9 yrs. old, carrying 126 lbs. rode by Gil. Patrick. The mare won the two first four mile heats in the incredible short time of 7 m. 32 1-2 sec. first heat, and 7 m. 45 sec. in the second heat. The race acquired great interest from being a trial between the South and North, and as in the great race between these extensive parties, decided by their champions Eclipse and Henry, in 1823, the North came off victorious. The former race was run in a trifle more time, the two first heats being 7 m. 37 sec. and 7 m. 49 sec. Sixty thousand people were estimated to have been present. \$20,000 were bet between the parties, and a very large amount among others.

LUSUS NATURÆ.—No freak of nature has ever surprised us more, than a Spanish bull of a dun color, now about 8 years old, exhibited near Tattersall's in Broadway. From his breast internally to his hips, he has apparently a *double organization*, double viscera, terminating in double organs of generation, and double ani, located on either hip. Between these is an excrescence reaching nearly to the ground and terminating in double, dwindled hoofs. The animal is of moderate size, very broad for his height, and evidently a twin conception in part, but consolidated into one.

There is also a cow exhibited with only three legs, the left fore leg never having been developed, but ap-

parently existing internally in an imperfectly organized state.

The lovers of *large stock*, who are indifferent to symmetry or the *fitness of things*, may find with the above associates, a big, black bull, that is said to have weighed last year 4500 lbs. We should not have disputed the weight if reported twice as great. But it is size without merit, *extension* without purpose, and has no charms for us. A Missourian would probably characterize him, as half locomotive and half allegator with a touch of an earthquake.

TO MAKE HENS LAY PERPETUALLY.—A correspondent of the Cultivator writes "Give your hens half an ounce of fresh meat each, chopped fine, once a day, while the ground is frozen, and they cannot get worms or insects; allow no cocks to run with them; and keep no nest egg, and they will lay perpetually." There is reason in the suggestion. Try it. But 'tis necessary they should be confined or without a nest egg, they will probably lay where it happens. They also require plenty of grain, water, gravel and lime.

Our friend and correspondent, J. R. Moser, Esq. of Flint Rock, N. C. asks as to the renovation of exhausted pine lands? We have no room to answer the enquiry in this number, but will do so at length in our next.

NOTICES OF NEW WORKS.

We have room only to notice the publication of the proceedings of the N. Y. State Agricultural Society, for 1841, a handsomely bound octavo volume, of upwards of 400 pages. It contains several well executed cuts of animals, and a large collection of valuable correspondence and essays, on the various topics of interest to agriculturists generally. We shall condense some of the most practical essays, and present them to our readers at an early day.

LADIES' DEPARTMENT.

TRANSPLANTING WILD FLOWERS.—To the lovers of flowers in their countless variety and beauty, we would earnestly recommend the introduction of many species of wild flowers, indigenous to our soil and climate, into the Floral department of their gardens. There is *simplicity* in all wild flowers, and simplicity is always an element of beauty, though beauty is sometimes augmented by a combination of simple elements. The Passion flower, and the Corinthian order of architecture, are striking examples of these.

Most of the cultivated flowers have been more or less changed in their characters, by their domestication and subsequent mixing with others; and from this results increased size, and generally a great addition to the variety and number of the petals of the flowers. This is shown to its greatest extent in the endless variety of roses, and in the Cabbage rose, particularly, its increased number is absolute deformity, for the petals are there so numerous, as to be completely rolled into wads. The Peony is another example of beauties so closely and immethodically huddled together, as to be unsightly. How different is the simplicity and unaffected beauty of the white or carnation thorn; the sweet briar; and the luxuriant though unpretending beauty of the Michigan rose! The white Japonica, how simple, yet how beautiful; and how apt an emblem of that purity, the study and pursuits of nature have so direct a tendency to produce!

The Dahlia, that brilliant and fashionable flower, so varied in its colors, so full and finished and elaborate in its arrangements, so just in its proportions, so gorgeous in its hues, partaking more of the Dove's metallic lustre, than of the light, transparent pencilings of our ordinary flowers, is a native of Mexico, and there exists in a simple form. We have seen many flowers on the Western prairies, that bore a strong resemblance to the Dahlia, and have no doubt but that cultivation would so far improve these, as to render them at least, formidable rivals. There is generally a great development in the parts of the plants that are subject to cultivation, greater luxuriance, variety of form, and increased brilliancy of color. A single example may suffice. A recent writer in the *Genessee Farmer*, says, "a little blue bell flower, about the size of an acorn, hanging on a stalk a few inches in length, but so slight as to be moved by every breeze, was transplanted to the garden. The second season, in place of a single flower, it produced a succession of them from June to October, on stalks 3 feet high, often three bells on a stalk, and in one instance 50 were counted!" What would not some of our lady admirers of these things give, for such an addition to their flower beds? Yet many may be obtained, perhaps equally brilliant, in their own neighborhood, could the timid little natives, that now "waste their fragrance on the desert air," be sought, and by kind entreaty and discreet care, be adopted among the cherished things of civilized culture.

In transplanting, care should be particularly paid, to give the plant as nearly the same soil and circumstances as those by which it was surrounded in its native bed; and if found in different circumstances, as they frequently are, choose from these, such as is most convenient for its new situation. It not unfrequently happens that a considerable change may be made in the habits of the plant, without danger to its existence, but it is proper to avoid the risk of this, till partial cultivation has developed its character, and somewhat accustomed it to its new position. R.

For the American Agriculturist.

Development of Character.

May, 1842.

GENT.—Forty or fifty years ago, industry was considered honorable, and those young men who were so fortunate as to have parents who could assist them in getting an education, when at home during their school or collegiate vacations, took pleasure and considered it a credit, as well as a duty to assist their parents in doing whatever was going on at home, thereby enabling them to do something for their other children, as but few were able, nor did they wish to educate all their sons for a profession, but thought it all important (I am speaking of New-England) to give them all a good common school education, and bring them up in habits of industry, morality and religion.

There were those whose parents could not give them even a common school education without their own personal exertions, who, after doing all they could at home, would go out and do little jobs for their neighbors, by which they earned a little for themselves and were kept from the habits of idleness, which finally led them to acquire good education and become useful and respectable members of society. Many such cases I knew, but there was one of which I had a particular knowledge, which I will give you.

A poor, but respectable and pious man, living in Connecticut, had several children, the eldest of whom was a son, who assisted him in tilling a few acres of ground, divided between corn and potatoes, beside a small garden for vegetables. This son would get

permission of his father to go and ride horse for a neighbor, when he always took his book in his pocket, and when he got a few rows before-hand, would tie his horse and sit in the shade and study his book, so that while he was learning a little, he was laying up a little for future use. When about seventeen, the time I first knew him, he had obtained the employment of distributing the Hartford and Litchfield newspapers. He came along once a week with the papers, which occupied one side of his saddle-bags, while the other was filled with oranges and lemons and other things, which he sold to the country people at a good profit. He continued this business about three years, when he went into a law office, became a distinguished advocate at the bar, educated a younger brother, who was little less eminent than himself; became Judge of the Supreme Court, while his brother became a Senator in Congress. I have been more lengthy and particular to shew what good moral principles, industry and perseverance can effect.

When our country was comparatively poor and the young men were brought up in habits of industry, how much more moral worth and weight of character was possessed and exhibited in our public men! This moral delinquency can be traced, I think, from the present superficial mode of educating young men without proper moral or religious culture.

According to present custom, they grow up in comparative idleness, with sufficient knowledge of writing and arithmetic to officiate as a clerk in a Bank or counting house, and having friends of some influence possessing too much pride to have a relative become a farmer or mechanic, who recommend him as a clerk where money, that root of all evil, is too powerful a temptation for an empty mind, unimproved by good instruction and unbraced by moral or religious principles, becomes too strong, and hence so many frauds and robberies, too great to have been imagined by one under the old regime.

In short, gentlemen, we must go back to the customs of former days. Until we do, we may look in vain for prosperity. The astonishing depravity which pervades our whole land calls aloud for reform—not in the males only, but the other sex have insensibly departed from the pure and useful habits of their grandmothers, which, however, has been more owing to the pride and indiscretion of their parents, than to any fault of their own. I may at some future time give them some hints for reflection.

Yours sincerely,

OCTOGENARIA.

For the American Agriculturist.

Our envied country dames are doubtless improving the delightful season of May and June, peculiarly our vernal months and Flora's gala season, not only in renovating their bloom and beauty under its soft skies and healthful breezes, but in the keenest enjoyments of those flowery treasures whose brief day will so soon be over. Our "merry, merry month of May" opened under the most animating and delightful auspices. The air was redolent with a thousand sweets from the native wilds and the surrounding gardens, and while every breath is fragrance, the eye revels in a world of verdure and beauty, and the ear takes in the most soothing and enchanting melody; the sweet notes of various birds, the rustling foliage and the louder waterfall, or the little rivulet as it dances gaily over its mossy bed, all have their grateful tale to cheer the desponding mind, and to give a livelier glow to the more youthful and ardent, and insensibly proclaim His praise whose are "the beauties of the wilderness"

"That makes so gay the solitary place
Where no eye sees them, and the fairer forms
That cultivation glories in."

Our city belles must hasten to their sub-urban, or more distant country retreats before the summer solstice has mounted its throne, or the rich variety of delicate and lovely flowers, which now lift their rainbow faces in every sheltered copse, and beside each native hedge, will be sought in vain; like past pleasures in retrospect and as transient. Then seize the moments as they fly, and while you glean flowers by the way, aim to draw a useful moral, even from the short-lived playthings of creation. Let us go first to the velvet meadows every where enamelled with flowers, where are the wild Geranium, *Americanum*, because our only one; the delicate *Vicia* or Vetch with its *papilionaceous* blossoms and graceful tendrils; the blue and white Lupines just passing away; the wild daisy which Burns so beautifully soliloquized after prostrating with his plow,

Wee, modest, crimson tipped flower,
Thou'st met me in an evil hour;

To spare thee now, is past my power
Thou bonnie gem.

The *Convallaria*, Solomon's seal, with the graceful bell-flowered *Uvularia*; the more striking *Erythronium* or Adder's tongue, a beautiful lily with mottled leaves; the *Aquilegia* or Columbine as fragile and more imposing; and that little flower our once tiny hands delighted to gather, the shining *Ranunculus* or butter cup. Ah! who will not in this merry month of fleeting joys, revert to their happy childhood of violet and daisy memory, when the last one plucked was still the fairest, and not one simple flowret passed unnoticed. Sweet days and most blessed memory! whose impress on our somewhat seared hearts, is yet fresh and green. But we must not linger here. We will now to the sedgy streams and to the sylvan dells where we find numerous varieties of the brake. Among these, the exquisite *Asplenium* or Maiden's Hair; the *Trillium*s or wake robin, purple, white and variegated, more conspicuous in our Western woods and well worthy of cultivation; the *Lychneidia* with lilac-colored blossoms surrounding their tall and slender stem, here and there too, a *Podophyllum* or Mandrake like some of the preceding, a flower of May, which has lingered awhile to gaze on the more gorgeous bloom and loveliness of June, and in some shady copse you may, perchance, find that curious plant which from its cup-shaped blossom sometimes, 'tis said, affords refreshment to the thirsty traveller, the side-saddle flower, or *Saracenia*, so called from its fancied resemblance to the head-dress of a Turk; the *Asclepias*, milk weed; and the beautiful *Orchis* tribe; and above us, throwing up its white petals into some branch of a neighboring tree, more green and lovely than the parent one, is the *Cornus Florida* or Dogwood. But look where we will, we can find no shrub or flower more beautiful than the superb *Kalmia*, the Laurel, and only those know who have seen it in its perfection, what enchanting beauty and magnificence it lends during its short-lived reign, to eastern woods. Pity it so ill repays the effort at cultivation.* We have found the more shady its retreat in the deep woods, the darker and more glossy its classic leaves, and the more roseate the hue of its rich and dew-textured blossoms. Among our Northern forest shrubs, we think it bears the same relative position, as does the far-famed Magnolia of the South in their flowery month of March, to the jessamines and myrtles, and various other plants raised with care in our conservatories, but which form the lovely hedge-row ornaments of that sunny clime. But we are out of our latitude, and we would fain return again to the beauties of our

own woodland scenes were they not too numerous to enumerate in detail, but we must allude *en passant* to the garden which now pays richly for the care that has been bestowed on it. The *Roses* are this month in perfection, and cast all other cultivated flowers in the shade, for who will long dwell over the tributary beauties of the parterre when the queen of flowers and of sweets, every where commands our homage and admiration? The beautiful and fragrant *Lilies* are also in their prime, and as usual, enter into competition with the rose. But to pass all these brighter glories by, better, we say, the lowliest flower that lifts its head from the bountiful bosom of the teeming earth, than none at all, for the humblest petal displays inimitable skill, and is a lesson to the overwise who too proudly esteem the finite mind; and is ever a welcome to guileless and trusting infancy; And who shall say there is not a lesson in every page of nature's book, in the flowers we tread upon, as well as in the stars of light which irradiate worlds and systems like our own! We quote the sweet sentiments of Mary Howitt, in answer to the query,

"Wherefore had they birth?
To comfort man, to whisper hope,
Whene'er his faith is dim;
That whoso careth for the flowers
Will care much more for him."

The thrilling influence of the retrospect of these sunlit, flower-decked, happy, childhood hours, may be gathered from the exquisite reflections of Madame de Genlis. "O, how much sweeter is it to me, to recall to my mind the walks and sports of my childhood, than the pomp and splendor of the palaces I have since inhabited. All these courts, once so splendid and brilliant, are now faded; the projects which were then built with so much confidence are become chimeras. The impenetrable future has cheated alike the security of princes and the ambition of courtiers. Versailles is drooping into ruins. I should look in vain for the vestiges of the feeble grandeur I once admired, but I should find the banks of the Loire as smiling as ever, the meadows of St. Aubyn as full of violets and lilies of the valley, and its trees loftier and fairer. There are no vicissitudes for the eternal beauties of nature; and while, amid blood-stained revolutions, palaces, columns, statues disappear, the simple flowers of nature, regardless of the storm, grow into beauty, and multiply for ever."

Hannah More, the impersonation of purity, judgment and good taste, after her eightieth year, said "the only natural passion left to her, which had lost none of its force, was the love of flowers." Lay up, then, my youthful friends, a rich store of pure and happy recollections for old age to dwell upon and revel in.

ELLA.

MAKING BREAD.—To make good bread, good flour, good yeast, and good management are required. One of the simplest processes of making it is as follows: To 8 quarts of flour, add 3 ounces of salt, 1-2 pint of yeast, and 3 quarts of water, of moderate temperature, and the whole being well mixed and kneaded, and set by in a proper temperature, will rise in about an hour, or perhaps a little more. It will rise better and more equally if the mass be covered. It must undergo a second kneading be formed into loaves for the oven. The more bread is kneaded the better it will be. Be careful not to allow it to become sour in rising. Milk will make white bread, but it will not be sweet, and dries quicker than when made with water. If loaves are lightly gashed with a knife around the edges before they are put into the oven, cracking will be avoided in baking. From an hour to an hour and a half is required to bake bread fully.

N. O. Pic.

* Can any of our readers afford to the florist a hint for its successful cultivation.

† The Magnolia at the South is a large forest tree.

*For the American Agriculturist.***CONNECTICUT VALLEY.**

Concluded.

MERINOS.—I am here reminded of a fine selected flock of Rambouillet Merinos, now in the possession of Daniel C. Collins, Esq., of Hartford, which he imported at considerable expense about two years ago from France, with a view to improve and re-establish the original stock of Merino sheep in this country. I hope he will favor the public with an account of them, and his success in their cultivation. I cannot but believe that frequent importations of original rams from the select French and Spanish flocks, will aid much in keeping up and improving the Merino stock in America.

At Northampton, I observed the anthracite coal of Pennsylvania was considerably used for fuel, being brought up the river in boats so cheaply that it competes successfully with wood, now in a great measure cut off from those lands susceptible of cultivation, or which yield but a sufficient supply to furnish ordinary building, post, and fencing timber for enclosures. An improved cultivation generally is evidently prevailing throughout New-England, and with its increasing wealth, we may look for a higher agricultural standard than now prevails. In domestic animals the yankee farmer is slow to change. The "good enough" practice has long held sway; yet occasional sights of a Berkshire or China pig on the premises of a tidy farmer, indicate that a reform is in progress in the important item of their pork material, as well as by glimpses of the spotted or roan outline of their neat stock in the farm yard or pasture, it is evident that "red" is no longer the *summum bonum* of all excellence in that quarter.

WESTERN RAILROAD.—I returned to Springfield, and after riding with a friend through its pleasant streets and around its delightful environs, built up and cultivated with the exceeding neatness and good taste which distinguishes almost every town and village in this valley, I retired for the night to my lodgings. The next morning I took my seat in the cars of the Western Railroad for Albany. Of this noble structure I can speak only in terms of unqualified admiration. After a course of 12 miles from Springfield, it enters the mountain region of western Massachusetts, and passes up thence for 20 miles to the summit in Washington, one of the most wild, picturesque, and difficult valleys in New-England. Through this confined hollow the Westfield river rushes, a wild, and maddened stream, which the impatient engine, whirling along its rapid train of cars, to avoid the obstruction of an impending mountain, anon leaped, and followed, with scarce enough of soil to rest upon, at times even jutting over

its torrent at the hazard of apparently impending destruction. Gigantic masses of solid granite fifty to eighty feet high, were cleft asunder for its passage, until it had attained the summit, 1400 feet above the tide waters of the Hudson at Albany. Here, on the dividing crest of the Green Mountains, crossing a considerable lake, whose limpid waters poured into either channel of the Housatonic and Connecticut, it commenced its descent for some miles along the declining mountain into the charming village of Pittsfield, delightfully nestled in a fertile and luxuriant valley; and thence, by a tortuous course, to the plain of West Stockbridge. It is a great work, worthy of the bold enterprize of those who planned and accomplished it; and a monument of glory to the State. Aside from its principal object of connecting the two great cities of Boston and Albany, it is of infinite service to the agricultural and manufacturing interests of Massachusetts, whose productions are thus brought within a few hours distance of the best market in New-England. This mountain region is mainly a grazing and dairy country, the hills being principally covered with pastures and meadow lands; while the vallies, although mostly grazed, yield tolerable supplies of grain. Butter, cheese, beef, and pork are its principal agricultural productions, a great part of which is consumed by the manufacturing population among them. Many fine herds of native cattle and excellent flocks of Merino sheep are grazed here; and no country, perhaps, on earth can boast a finer and hardier race of people than the county of Berkshire. Appearances of thrift and worldly comfort spread out on all sides, and the results of well-applied industry are visible in all their farms and villages; and although their soil be comparatively sterile, and their climate severe, their active sagacity, their well directed intelligence, and their never tiring industry accomplish for them what without these requisites, the richest soils and greatest local advantages would deny.

At West Stockbridge the depôt of the great marble quarries of that region, we were met at the State line by the train of cars from Hudson. They contained divers passengers from that city and from Kinderhook, composed of lawyers, members of Assembly, and office seekers, who were going to Albany in readiness for the commencement of the annual session of the Legislature the next day. Here, meeting several old friends and acquaintances, politics and its etcetera attendants of Albany Regency and Whig declension in New-York, became the topics of discussion; and, being an old stager in those matters, I could not resist the temptation to mingle in the debate, and my agricultural musings ended with the soil of Massachusetts. L. F. A.

TO BREED MALES OR FEMALES.—We have heard it asserted by distinguished breeders, that in seven cases out of ten, when the progeny was single, they could produce a male or female offspring as they might wish. We have had some experience in this matter ourselves, but never obtained any thing like the certain results above expressed. But we will give the rule:

Should the sex required be represented in the intended parents by the most stout and robust, or the one possessing the highest condition, the rule would require them to be coupled in this condition, increasing their relative diversity perhaps for the occasion, by exhaustion on one side, and augmenting the vigor on the other. If the weakest or lowest in condition possess the sex sought, the physical superiority of the most athletic, should be temporarily changed so far as possible for the occasion, by partial exhaustion or fatigue, as might be done in a variety of ways, especially if in the male, by sexual exertion.

Some learned writers have contended, that the sex of human progeny is determined by the advanced age of the parent, the one decidedly (*relatively*) the oldest, controlling it, and though true enough frequently, may yet be considered an accidental result. Walker who has written latest and fullest on this subject, we never considered as any reliable authority, and we have perused his works more for the purpose of noticing the development of his startling theory, than any established or well authenticated principles. The matter is, however, worthy investigation, and we shall be glad of the experience of such gentlemen as have made sufficiently extended and accurate observations from which to draw general and incontrovertible conclusions.

Llangollen, Ky., April 22, 1842.

GENT.—We have had no winter in Kentucky, and vegetation is three weeks earlier than usual this spring, as you will perceive from the following memoranda:

March 10. Erythronium in flower.

14th. Sanguinaria Puccoon do.—Flower buds of the Sugar Maple swelling.

20th. Open—Leaf buds swelling.

April 1. Open—Leaves full grown 22d.

Acacia, black locust, in bloom 22d April. Leaf buds of the black walnut (the latest tree here in acknowledging the influence of spring,) swelling 10th April. 22d. Leaves expanding, but not fully grown.

April 15. The white bractes of the Dogwood (*Cornus Florida*) expanded.

17th. Judas-tree (*Cercis*) in bloom—Strawberry, cherry, peach-fruit set 12th.

22d. Flower buds of the vine appearing—many of the leaves full grown.—Panicles of Kentucky blue grass and of orchard grass coming out 16th April, and Dandelion seeds ripe and flying off.

The early influence of spring is felt too in the waters. In the smaller streams the fish were spawning on the 1st April, and the crayfish are now, 22d April, all in a soft state. The snakes, both of the land and water, were out and as brisk as in midsummer, on the 8th and 10th April.

What are the accidental or rather occasional causes

which produce such remarkable differences of temperature in the same latitude, and on the same isothermal line in different years? Does the earth, in its revolution on its axis, affect the position of the internal, or as it is called, central fire so as sometimes to bring it nearer to the external crust on one side than on the other? Is this going *too deep* for the cause? Perhaps it is, but I do not know it; and I do believe that there must be and are other causes than those usually assigned for the variations of temperature so great and extensive as do occur.

I have just received the first No. of the "American Agriculturist," and congratulate you on its contents and form. The book form is decidedly the best for all periodicals worth preserving, and none are worth taking by a farmer which are not worth preserving. But their preservation is not all. The form of large papers renders them very inconvenient and tiresome to the arms to read, if you keep them expanded, and if not, you are constantly folding and unfolding to get at the contents.

With sincere wishes for the success of the Agriculturist, I am, gentlemen, very truly, your obedient servant,

JOHN LEWIS.

P. S. In walking out this evening I find the May apple (*Phodophyllum*) in full bloom.

The following was handed us by an intelligent friend and correspondent who was present at the meeting.

For the American Agriculturist.

National Agricultural Society.

GENT.—I drop you a line for the purpose of informing your readers that the anniversary of this Institution was held in Washington on the 4th and 5th instants. The numbers in attendance were small, and the delegates, principally from New-York and New-Jersey. The meeting took place in the beautiful building recently completed for the Patent office. The President, the Hon. Mr. Garnet of Virginia, took the chair:

*In opposition to the suggestion of our esteemed correspondent, we are compelled to believe from extensive observations that have been made to test the influence of internal heat, that it never approaches sufficiently near the surface, to affect the temperature of our atmosphere. The only way internal fires can affect external temperature, in the present condition of the earth, is through the influence of volcanoes. These, when generally in a very active state, will doubtless produce an effect on the atmosphere, that may be felt over the entire Globe. But we are not aware that this cause has operated in producing the mild weather during the past winter. There is no doubt, from the rapidity and extent of atmospheric currents, that the causes of variations, from an ordinary condition of temperature in any given latitude, may exist thousands of miles from the region affected. Indeed, we conceive this to be the solution of the whole question. We believe sufficiently extensive observations have never yet been made to test this matter fully, but we have noticed the fact, that frequently when a season has been unusually warm in one longitude, another has been at the same time, as remarkably cold. Now, may it not be, nay, is it not in the highest degree probable, that in the region of unusual warmth, unwonted currents of atmospheric air, elevated in their temperature, are wafted to it from the torrid zone, and other regions are fanned by breezes from the frozen North? That the force of these winds is not strong, and always indicating the heat or cold by the direction from which they come, even if accurately noted, and exhibiting a result different from what is to be expected, would not be a conclusive objection, when we reflect that the atmosphere possesses considerable density 40 miles above the surface of the earth, and that it is a sufficiently well attested fact, that numerous currents of air are constantly passing in every direction at the same moment, over the same point; and the checks and counter currents coming in contact with any given one, may alter its direction and cause it to impinge upon the earth in a direction contrary to its natural (usual) course. Clouds, by intercepting the sun's rays; and evaporation, by abstracting radiating heat, and locking it up in a latent state; and rains by condensing vapor and liberating it, (the latent heat,) are all operating causes in affecting the temperature. But the subject opens a wide field for observation, and our limits will not permit us to pursue it.

and delivered a very sound and interesting address, which will soon appear from the press. Mr. Callan acted as Secretary. The principal business done was the appointment of two committees—to report on the advisableness of a publication in the service of the Society, and the expediency of instituting an annual cattle and agricultural exhibition in Washington. The Chair nominated on the first committee, Hon. H. L. Ellsworth, Rev. J. O. Choules of New-York, and Dr. Ives of New-Haven, Conn. They reported in favor of such a publication to be issued under the patronage of the Society, but to subject it to no expense. The other committee recommended the call of a committee of gentlemen from the various States, to meet in Philadelphia, the second Tuesday in July, to determine upon the arrangements for a great National exhibition to take place in Washington.

The delegates from New-York were Messrs. Nott, Prentiss, Rotch, Bergen, Johnston, Tucker, Choules and Wakeman—and Mr. Horner from New-Jersey. The Hon. Mr. Woodbury, Mr. Elisha Whittlesey, Mr. Warren of Georgia, and some other public men were present during the session.

Mr. Garnet was re-chosen President.

Very respectfully, G. P. T.

For the American Agriculturist.

RAISING CALVES.

Black-Rock, May, 1842.

We have frequently heard the question mooted, What is the best manner of raising calves?

To this, several answers may be given, according to the use and purpose for which they are destined. But to make the subject familiar and illustrate it fully, we will answer *seriatim*.

1st. For veal. Fatted calves, if the circumstances of the farmer, and the price of the article will warrant, should be kept till five or six weeks old. From their birth they should draw all the milk fresh from the cow that they require; or at any rate all she will yield, if it be not more than the calf will drink. To the milk, if not enough is yielded by the cow, a light boiled gruel of any sort of meal may be added, with a trifle of salt. This gives a fine flavor to the veal, and assists in the fattening. It is a very simple operation, and attended with little trouble. If the dam be a great milker, it may suck thrice a day. Many people give their veal calves only part of the milk when they require more. This practice may make veal *after the fashion*, but it will not be good veal. The best can only be made by giving the calf *all it will eat*.

2d. For making fine blood stock, and acquiring early maturity. Let the calf have *all* the milk the cow yields, if he will take it. As soon as he will eat roots, meal, hay, or grass,

let it be fed all it wants of these, or either of them. The animal will pay in price and appearance for extra attention, and its early development will amply recompense the cost. No *first rate* animals can be produced without full and regular feed. In this practice, the calf may either run with the dam, or be enclosed by itself in a stable, pasture or yard. All such, however, should be early broke into control by the halter, and made entirely manageable. They are, besides, least troublesome, reared in this method.

3d. Those intended for store cattle, and for working oxen, beeves, and milch cows for common purposes.

For such uses, calves may be reared in different ways. Milk is always the first and indispensable food for young animals, and of this the calf in its early days should not be deprived. It is absolutely necessary for its existence, however, but a few weeks after birth. In those sections of the country where cows are kept for the sole purpose of breeding and raising their progeny, and the dairy or milk forms no part of their profit, no better plan than to let them run with the calf, can be adopted, care being taken that the surplus milk, if any, be daily drawn from the udder, to keep it in a healthy condition. But where the milk is required for dairy purposes, the calf should, after the second day, be entirely taken from the cow, and learned to drink by the finger. This need only be continued for a day or two in most cases. After a fortnight, skimmed milk, or whey, or a light porridge, or gruel of *boiled* meal (raw meal at *first* is injurious to the calf, causing them to scour,) may be added according to circumstances. The condition of the calf should be watched, and the food regulated, enriched, or reduced, as its appearance may require, and in a short time it will eat grass, meal, roots, or hay. The animal, however, requires continual attention, and a woman after all is the best nurse for a young calf. We have indeed often known fine stocks of calves raised with very little milk, the principal early food being hay tea, and the docile, petting care of the faithful nurse. *Good nursing is almost every thing, for without it calves, with a scarcity of milk, will not thrive.* Salt should be used freely and placed where they can get it when they like, and if at all inclined to scour, a lump of chalk should be placed within their reach, or a small quantity pulverized with their food. Young stock, to be sure, raised in this way, will not so readily attain their growth to two years, as if raised at the foot of the cow; but, ultimately, will reach their full size and good qualities. Such need a little more care, and keep better the first winter than the latter, but after that, are equally hardy and thrifty. They require good shelter.

to be kept clean, and free from vermin; and may then go on their way rejoicing.

We can only repeat, that no one can be successful in raising *any* kind of stock without care and good attendance. These are indispensable, and the females, and young, and old folks, on the farm, can always attend to this department. The time of the farmer and out-door laborers should never be abstracted in the busy seasons for small choring of this kind. We have known many farmers' wives, and quite *genteel* folks too, who have raised their score, or half-score of calves annually, and they hardly knew that they had eaten anything from the material of their dairy.

L. F. A.

We have been favored by a highly intelligent and esteemed friend at the South, with the following article on the cultivation of one of our southern staple articles. We commend it to the careful perusal of our southern readers.

On the culture of Rice, from the pen of the late Hugh Rose, Esq. being in answer to queries from the late William Washington, Esq., both of whom were most respectable Rice planters in the State of South Carolina.

Query 1. What preparation do you give your land before you begin to plant?

2. When do you begin to plant?
3. Do you select your seed, and how do you know the best seed? Do you prefer seed from the North or South, and how often do you change your seed?
4. How many rows to the task or quarter of an acre? How many bushels of seed to the acre?
5. Do you scatter in the trenches, or as it is technically called, string plant?
6. Do you point-flow? If so, assign the reasons.
7. How many times do you hoe before you put on the water?
9. If in grass, would you put on the water or not? What do you call a good crop to the acre, or to the hand?
10. Have you ever ploughed your land while the crop was growing? or do you object to it, and why?
11. Do you keep your land dry all the winter, or do you flow it?
12. Have you ever used salt or brackish water, and what has been the result? Have you ever used lime on your land, and how do you apply it?
13. How do you know the best time to cut rice, and what is the task of a laborer in harvest?
14. Is there any peculiarity in your preparation of rice for market?
15. Do you ever judge by the roots of the health of your rice?
16. Have you ever practised a succession or rotation of crops, and if so, which do you most approve of?

Answers as follows in the order in which the above queries are submitted.

Query 1. I cultivate inland swamp, of a strong tenacious blue clay, which I strive to reduce to a good tilth, by ploughing a portion, and always digging what I cannot plow. I harrow twice before planting, in as dry a state as is practicable.

2. My land being cold, I seldom begin to plant before the first week in April, and never earlier than the 25th March.

3. With respect to the first question, I reply, that I occasionally change my seed, and procure it from tide swamp, of light and rich soil, not regarding whether it is north or south of me. I judge of seed by its weight and being free from grains of white and red rice.

4. I plant altogether in half acres, 150 feet square; and after repeated experiments, to ascertain the distance best adapted to my land, I have determined in favor of 14 inches, and sow two bushels of seed to the acre.

5. I observe a medium between the two, and neither sow very broad or narrow. I have never planted on string, as it is termed.

6. Being dependent on reserve water, I never have had recourse to the point-flowing.

7. I hoe twice, and do not then water, unless a dry state of the land renders it necessary. I do not advocate for early or long watering. I do not water beyond ten or twelve days, until rice is in the second joint.

8. My reply to the last query will answer this also.

9. There is much grass that flourishes in water, and unless in a very young state, would not be destroyed. The red and white shank for instance, with other water grasses. If there is a large portion of the crop grassy, I would have recourse to water, as much of the grass would be destroyed. I consider fifty bushels of rice to the acre a fair and good crop on an average, or ten barrels to the hand.

10. I have ploughed a small portion of my rice, when I planted the distance of 16 inches, but I soon discontinued it, as no material advantage resulted from it.

11. I kept my land flowed until February, if practicable, for the use of a reserve mill.

12. I have never used salt or brackish water on my land. I have this year limed an acre of rice, at the rate of 22 bushels spread on the land after ploughing, and harrowed in previously to being trenched. I am at present ignorant of the result from personal observation, but am informed there is no visible difference in favor of the part limed.

13. When three or four of the lower grains are beginning to turn yellow, is, I think, the proper time to begin to cut; and if the rice stands well up to the husk, three-quarters of an acre is a reasonable task in cutting. The tying and carrying to the barn yard must be regulated by distance and other circumstances.

14. I used one of Mr. Lucas's water mills,* without any peculiarity as to preparation.

15. No answer to this query.

16. I have not paid much attention to a systematic rotation of crops; but doubtless, very beneficial results would reward the agriculturist who did it.

Permit me to suggest another query, highly important to the interest of the rice planter, viz; The most eligible time of turning off the water, previous to the cutting of rice?

Opinions differ much on this subject, and it is a desideratum really worthy of investigation.

*The above were written in the year 1828, before Strong & Moody's Patent Rice Mill was invented, which was not until about the year 1833.

I will here add, good rice sells on an average for from 75 to 80 cents per bushel, though this year it will not exceed from 70 to 75 cents per average on account of the very large crops made this year.

A. Watson, Esq. one of the best planters in this State, concludes his answers to the foregoing queries, thus:

"I will now in a few words sum up the whole of the art, which, from my experience, is requisite:—fallow your land close in the winter; be industrious; attend strictly to the hoeing; pick it clean, and you may always expect a fair crop." He generally averaged 60 bushels to the acre.

Sou. Agt.

Prior to the invention of Strong & Moody's Patent Rice Mill, rice was cleaned by the pestle and mortar, wrought by hand, or by water, steam or horse power. When cleaned by hand the rice in its rough or unhulled state is put into a mortar holding about a peck; the pestle is then applied by the hand until the grain is divested of its outer hull and inner cuticle, after which the flour and small rice may be separated from the large by fans and screens, or it may be winnowed. In this manner rice is sometimes prepared for family use, but never in this country for market. When rice is cleaned for market by pestle and mortar in all our rice-growing States, the following is the process, viz: It is first passed through what is called a sand screen, which removes most of the sand and trash from the rice. From that screen it goes through a pair of Liverpool millstones, so wide apart as only to remove the outer hull; as it comes from these it is carried by elevators to a fan which blows off the chaff, (which is the outer hull.) It passes from the fan into mortars, these mortars contain about four bushels each and are in number from 5 or 6 up to 22, seldom more, according to the work to be done and the power possessed where it is pounded with heavy pestles from one hour and a half to more than two hours, when it is removed from the mortars by hand into a place prepared for it, where it has to remain until the moisture which has been produced by the action of the pestle on the rice, is dried. Then it is carried up by elevators to what is called the rolling screen, which is about 16 feet long, having three different size meshes. Through the first size the flour passes, through the second, the small rice, through the third, the large or merchantable rice, and over the end of this screen, the head rice. From that screen, the small and merchantable rice goes into a brusher, so as to remove the flour from the grain. Under this brusher is a fan through which it passes. From this fan it is carried to the barrel, where it is well packed, and completely prepared for market. This mill was invented by a Mr. Lucas an Englishman, and has been in use for many years in our southern States, and has proved of great benefit.

Strong & Moody's Patent Rice Mill was invented in the town of Northampton, Massachusetts, about the year 1833. It cleans the rice on an entire new principle from that of the pes-

tle and mortar. This mill, after overcoming the various difficulties which the most of new inventions have to contend with, is now in successful operation in Charleston, South Carolina, and various other parts of the world. It is thought by many who are well able to judge, that it will ere long come into general use. This mill can use all the machinery that is used in a pestle mill, excepting the pestle and mortar. Rubbers are substituted for them, made in the form of millstones, from 18 inches to more than five feet in diameter; the smallest drove by hand, the larger by horse, steam, or water power. Through these the rice after it is hulled, is passed, and in its passage, is cleaned in the most perfect manner, is less broken than when pounded with heavy pestles, is cleaned much faster, is more free from grit, and keeps better than by any other mode of cleaning. The reasons for its keeping better in all climates, as it is found to do, (either on the sea or on the land) are caused by a greater degree of heat being produced by the rubbers; which is near 120 degrees in place of 65 or 70 degrees, which is believed to be produced by the pestle and mortar. This degree of heat produced by the rubbers, in a good measure kiln-dries the rice, and at the same times removes the dampness from the flour, so that it can be at once passed through the screen, brusher and fan into the barrel, when it is ready for market. In this process it is more perfectly divested of the flour, (on account of the flour being so well dried by the increased heat the rice receives from passing through the rubbers,) than by any other mode of cleaning. By this new mode of cleaning, the *eye of the grain* is much more effectually removed, which is another great reason of its keeping so well.

Very respectfully, your obedient servant,
Charleston, S. C. April, 1842.

N.

For the American Agriculturist.

Orange County, Its Fair, Stock, &c.

May, 1842.

GENT.—I beg to lay before you some items of information in relation to the fair and other matters in this county, and have to express my great surprise that no notice has yet appeared in the agricultural papers of the day, of our meetings here. A society was organized in September, but such was the apathy manifested by the farmers generally, and the number of members so few, that it was deemed most advisable not to hold a fair in 1841. However after a few meetings of the friends of agriculture good and true, and great exertions on their parts to enlist their friends in the good cause, it was determined that a Fair should be held on the 17th November. This was strongly opposed even by some warm friends of the society, they pre-

dicting that it would be a failure from the few that had already attached themselves to the society, the season being too far advanced, and the parties having stock, &c. to exhibit not having time to prepare it. Those who took but little interest in the matter and whose penurious dispositions would not allow them to contribute a dollar, (the price of membership) put on an incredulous smile and "guessed it would not amount to much." But judge, gentlemen, what was the pride and satisfaction of the few who planned and carried forward this matter, when I tell you that on reading over the list of members on the day of the Fair, that they numbered nearly 200. Some contributed five dollars. Such was the enthusiasm and good feeling that prevailed, that several successful competitors most generously presented their premiums to the society. This year we expect a large addition of members and a much better exhibition of stock. Come up to our next Fair and take a look at our good things. I will guarantee that we will show you some good butter, if nothing else.

The show of stock, considering the time of preparation was so short, was good.

HORSES.—The first premium for stallions was awarded to P. H. Fowler, of Montgomery, for a young, compact well-made horse of good figure and action, a little deficient in size but a very useful horse. Horses have sadly degenerated in this county within the last 20 years, owing to there not being sufficient encouragement for the best horses to stand here.

Cows.—Your readers will be surprised to hear that the exhibition of cows, although much the greatest dairy county in the United States and its butter celebrated and known far and wide for its excellence, was meagre in the extreme; indeed there was but one approaching to anything like a good one. This was shown by N. A. Deiderer, a breeder of some nerve and spirit, who exhibited other good things.

It is well known that dairy districts never were celebrated for breeding high-bred cattle of any sort, and experience seems to caution them not to dip too deep into the blood of the fashionable Durhams. The writer would consider that anything above half blood for the generality of farmers of this county would be of doubtful advantage. We know that the high-bred Durhams are suited only to those countries possessing a certain degree of natural or acquired fertility, such as we do not possess in this county: at least, the dairies are not pastured in many instances on lands of high fertility here. That the half bloods may be generally used to great advantage, I firmly believe. Some very successful experiments have been made by a few good farmers, which would seem to

warrant the more general introduction of Short Horned bulls. I know of no better plan to improve the shapeless cows, and know of no man from whom they can be had, combining all the excellencies of that breed with such a large and valuable herd to choose from, as E. P. Prentice of Albany, certainly the Bates of America.

I am of the opinion of your A. B. A. that the produce from the best cows here got by a high bred Short Horned bull, would certainly answer all the purposes of the Ayrshire breed, if not excel them in most respects. You increase the size materially by the cross, and the milking qualities are apt to improve. By taking an animal of more symmetry, when no longer fitted for the dairy, it will be worth double the money the present race of scrubs are for fattening. These half breeds have not that delicacy of constitution that the thorough breeds have. Experience which the writer relies on, proves that the high bred Durham (and the Herefords also) are not profitable for dairies either in this country or in England. For milkmen near cities they do better.

SHEEP.—We had a few pens of sheep here that would not have disgraced any exhibition in the state. In this county reside some parties that have been very extensively engaged in importing all the improved kinds of stock. Sheep have especially attracted their attention, and it is to them that the society are indebted for showing some of the finest Cotswolds and South Downs. Although from the short notice there was not time "to get them up," yet they were in fair condition and showed what there is in breed. Much has lately been said of the cross between the South Down, and Merino or Saxon. I am opposed to such a cross and will give my views on this head as well as on the defects and excellencies of the South Down and other improved varieties of English sheep in my next. I cannot subscribe to the opinion that they are more exempt from the attacks of the hyatid than other breeds. They feed among John's-worth with impunity.

Of the Saxony or Merino we had only one or two sheep. This county could a few years ago boast of numerous and extensive flocks of these useful sheep. But owing to the low price of wool the farmers have got nearly rid of their flocks. It would be very alarming were it not for the fact that in the West and South West, where the soil and climate are better adapted for the animal and land cheaper, many are engaging in raising wool with complete success. It is an immense source of wealth to any country. Would that our prospects were better in this branch of agriculture and that the manufacturers were better protected. Farmers are too indifferent on this matter of protection.

Hogs.—The show of hogs was upon the whole decidedly bad. There were a few good ones. Captain Robinson of Newburgh had a white imported boar on the ground that attracted much notice, from his great length and size—his back was not good and lacked thickness. It was rumored at the fair that he was called another 'white' Berkshire. It is hardly far enough West for 'white' Berkshires. The Brentnals of this county who were at the fair, and have some excellent hogs, but exhibited nothing, were, it is believed, the first to introduce Berkshires in the United States. They are not yet by any means common; indeed but very few have them in their purity. Those engaged in rearing them find a better market South and West, than to the neighboring farmers, some of whom are prejudiced against the breed and color. But if it is true, and no good breeder that understands his business will deny it, that those animals which improve the fastest are the most handsomely formed and the most beautiful to appearance, then I think the Berkshire claims our preference, as he is beyond all doubt or cavil, the most beautiful to appearance where he has been well bred. There was quite a show of farming implements, grain, roots, &c., for which premiums were awarded. A considerable number of the agricultural papers were very properly given in the place of small sums of money.

The committee experienced great inconvenience in selecting judges to act on the occasion, and have, at the suggestion of some of its members, determined to invite practical breeders living out of the county.

Yours, &c.,

S. W. JR.

THE KITCHEN GARDEN.

PARSNAP.—This vegetable requires a deep, rich, mellow soil free from stones and coarse gravel. A sandy loam is accounted the best. They may be raised from year to year on the same ground. As the seed is very light and vegetates slowly, it should be soaked or kept wet for several days before sowing. Let the ground be plowed or dug and worked deep, and well harrowed and raked over, so as to make a smooth, level surface. Sow the seed in drills, eighteen or twenty inches apart, and as early in the season as the ground can be prepared; the earlier the better, to insure a good crop. The seed may be covered an inch or more in depth.

As parsneps require the whole season to come to maturity, and are not fit for use till ripe, other seeds that come off early, may be sown with them, such as lettuce, radishes, and beets or carrots that are to be pulled early in the season, when the roots are small.

When the plants are two or three inches high, let them be thinned so as to stand from four to six inches apart. Hoe them and keep them clear of weeds till the leaves get so large as to cover the ground; after which they will need no further attention till you come to dig them. Some let them stand in the ground through the winter, and they are generally considered the better for it, provided they are dug as soon as the frost is out of the ground, for if they are left until they begin to sprout, their good qualities are much impaired. But if they are dug in the fall, they should be put into a cold cellar or out-house and covered with dirt or sand, as they are liable to wilt in a dry room if left uncovered. They ought to be dug carefully, without cutting or bruising, nor should the tops be cut close, nor the side roots be cut off; otherwise they are apt to rot or turn bitter where they are cut or bruised. If put into a warm cellar they are apt to sprout, which soon spoils them; but frost will not injure them at all, neither in the ground nor in the cellar, if covered with sand or earth.

Parsneps are often raised in fields to very good profit; for besides their uses in a family, they are excellent food for neat cattle, sheep, hogs or horses. Beef fattened on parsneps command a higher price in England than fattened in any other way. Milch cows fed on parsneps give richer milk, and yield more butter, than from any other food. Hogs are also said to fatten very easily on them, and to produce superior pork. All these things prove parsneps to be a very valuable crop, and well worth the farmer's attention.

PEAS.—There are many varieties of peas; we however cultivate but four or five kinds. For the early kinds the soil should be strong and rich; and moderately rich for the later kinds. Fresh stable dung is considered injurious to peas. A sandy loam, enriched with decomposed vegetable matter will produce good peas.

Swamp muck spread upon the ground and plowed in, is a valuable manure. For early crops, more especially, the soil should be light; and a dry, warm soil is the most favorable. All peas raised in a garden, in order to produce a good crop, should be supported with branching sticks or brush. They should be sowed in drills, the smaller kinds two inches in depth, at least, and the larger kind still deeper, four inches, some say six inches is none too deep, as they take better hold of the soil, which in a light soil is a great advantage.

We commonly plant two rows, five or six inches apart, for one row of sticks. The space between the rows of sticks must be regulated according to the size of the different kind of

vines: for the *Early Frame*, *Early Petersburg* or *Early Washington*, about two and a half or three feet apart; the *Large Marrowfat* or *Green Marrowfat* require at least four feet space. As the plants rise to three or four inches in height they should be well hoed and cleared of weeds, and the soil drawn up around them while the vines are dry: this should be continued as they rise higher. When from six to ten inches high the sticking should be done. Let the sticks be fixed firm in the earth, so as not to be blown down by hard winds. The sticks or brush, as to height, must be regulated according to the height of the peas.

Field culture.—The common method of raising field peas is to sow them broad-cast. In this case they should be sown much thicker than many farmers sow them, and be plowed in. There is very little danger of burying them too deep; it is said they will vegetate and come up if buried a foot deep. Peas sowed thin are very apt to fall down, and if the season be wet, they will rot on the ground; but if they are sowed thick, they will cling together and support each other, and yield much better by having more benefit of the sun and air.

Many people are much afflicted with buggy peas, especially in the old settlements. This is occasioned by a small brown bug that deposits its eggs or larva in the young pods. The only effectual remedy against this, that we know of, is to sow the peas late; so that they will not blossom till the period of depositing the larva is past. For this purpose they should not be sown before the 10th of June. We are informed that a respectable farmer in Rensselaer county sowed his peas on the 10th of June, six years in succession, and never found a bug in them; while his neighbors who sowed earlier, had their peas filled with bugs. If your seed peas contain bugs, we would recommend to scald them by putting them into a tub or pail, and pouring in boiling water enough to cover them, and stirring them briskly about a minute; then pour off the water and add a little cold water to them and sow them soon. This will destroy the bugs without injuring the peas; and they will vegetate the sooner. But if your peas are buggy, your ground will require more seed; because when the chit of the pea is destroyed by the bug in it, the pea will not come up.

PEPPERS.*—As these require the whole season to come to maturity, they must be sowed early. Our method is to sow them in a hot-bed very early in the spring, and cover them with glazed sashes, when the weather is cold, to prevent in-

jury by frost. They will be large enough to transplant in May, and may be transplanted in rows about two feet apart each way. Hoe them well and keep them clear of weeds; and if the soil is light and warm, they will come to maturity in good season. The squash pepper is reckoned the best for pickling.

PEPPER GRASS, OR CURLED CRESS.—This will grow on any common soil; but a light, rich soil is the most favorable to it. It may be put in at any time from early in the spring to September. When it is up sufficiently large for salad, it may be cut up as it is wanted for use; but it soon becomes too large and tough, and therefore should be sown once in two or three weeks, in order to ensure a constant supply through the season.

RADISH.—A light sandy, warm soil produces the best radishes. For the long tap-rooted kinds the ground should be plowed deep, and well worked over to make the soil mellow. They do not require a very strong soil; but if not sufficiently rich, it may be manured with swamp muck or other light vegetable mould. A little lime and strong ashes mixed with this manure, or strewed in the drills before sowing, will be highly beneficial in quickening the growth of the plants and destroying the worms, which in some soils nearly spoil the roots: for the more rapid the growth, the more tender and better is the root; and for this reason it is difficult to have good radishes very early in the season, without raising them in a hot-bed or in a very warm soil. Hence those raised in June or July, (if the season be not too dry,) generally grow the quickest, and if eaten when young, are the most tender and crisp; though they will do well in May, and even in September, if the weather be warm.

To ensure a constant supply of good radishes, they should be sown once a fortnight; for they are very unwholesome to eat after they become old and tough.

SAFFRON.—We generally sow this seed in double drills, about six inches apart, with a space of three feet between these double rows, for the convenience of passing and repassing to gather the flowers. They should stand from three to six inches apart in the drills, and be well looked to and kept clear of weeds while growing. When the flowers begin to appear they should be strictly attended to, and gathered into baskets once in two or three days, as long as they continue to blossom. These flowers may be spread on sheets, or on a clean floor to dry; and when sufficiently dried, may be packed away for use.

SAGE.—This useful herb requires a good rich soil, and may be sown in drills, about two feet apart. When of sufficient size for culinary purposes, it may be thinned out as it is wanted.

* Droppings from the hen roost are the best manure for peppers.

The plants intended to be kept over the winter must finally be left at the distance of two feet each way. These may stand through the winter, covered with straw or other litter, or they may be taken up and put into the cellar. After the first year they will grow and bear seed a number of years in succession; but new seed should be sown once in three or four years, as young roots produce the most thrifty shoots. The leaves that are preserved for use, may be collected and dried, and packed away for future use. Botanists press them into hard packages and put them up in papers for market.

SALSIFY OR VEGETABLE OYSTER.—This vegetable, in appearance, resembles a small parsnep; it is raised annually from the seed, and may be cultivated in the same manner as parsneps or carrots, and is as easily raised.

It is a vegetable highly esteemed by those best acquainted with it.

There are various modes of dressing and cooking this vegetable. It is very excellent boiled and mashed up like squash or turnep, with a little salt and butter. Some make soup of it; in that case it should be mashed fine in order to thicken and increase the flavor of the soup. Others prefer it parboiled, and then sliced up and fried in batter, or without. A writer in the *Massachusetts Agricultural Repository*, observes that "In its taste it so strongly resembles the oyster, that when sliced and fried in batter, it can hardly be distinguished from it;" and adds, "If your gardeners would introduce it into market, and our citizens once try it, there would be no danger of its ever failing hereafter to be raised. It is in eating from November to May precisely the period in which our vegetable market is most deficient in variety."

SUMMER SAVORY.—This plant will grow in almost any soil. It may be sown in drills about twelve or fourteen inches apart, so as to pass a hoe freely between the rows. Let it be kept clean from weeds, and if it comes up too thick, let it be gradually thinned out as it is wanted for use, and it will not require any further trouble. To dry it for winter use, it should be cut when in blossom, and spread on the floor of an upper room, or garret, where it can have air, and not be exposed to the sun. When it is sufficiently dry, tie it up in bunches and wrap it in paper, or put it away in clean bags for future use.

SPINACH OR SPINAGE.—The round leaf spinach, which is the only kind we raise, may be sown in April. It requires but little space in a family garden; one row of a suitable length, on the border of a garden, or beside the alley will suffice; but the value of the plant for greens depends much on the richness of the soil. It requires some attention while young to keep

it clean from weeds; and if the weather be dry it will need frequent watering.

SQUASH.—Squashes require to be treated much after the manner of melons and cucumbers. The *Lima Cocanut*, or *Valparaiso squash*, as called by some, should be planted early, on a rich, warm soil, as it requires the whole season to come to maturity. This and the *Winter Crook-neck*, as they produce running vines, require to be planted in hills at the distance of six or eight feet, but before they begin to run, the weakest plants should be taken out, leaving not more than two in a hill. The *Summer Crook-neck* and the *Summer Scollop*, being what are called *bush squashes*, as they have no running vines, may be planted in hills about four feet apart, each way. These must be cooked while young and the skin tender, as they are unfit for the table after they begin to be hard. The *Summer Crook-neck* is esteemed as the richest and best summer squash we cultivate; but it is not so productive as the *Summer Scollop*. The *Lima Cocanut*, when baked in the oven, is considered by some equal to the *Carolina Potatoe*, to which it bears a near resemblance.

TOMATO.—This plant while growing has somewhat the appearance of a hill of potatoes growing in the garden. It is a South American plant, and bears its fruit on the branches, much resembling the squash pepper. We shall notice but two kinds, the large and small, of which there is no material difference, except in the size, and the ripening of the smaller kind a little sooner; but the larger kind is generally preferred for common use.

To obtain early fruit, the seed should be sown in a hot-bed or in boxes of light, loose earth, about the middle of March. The bed or boxes should be exposed to the rays of the sun as much as possible, and be secured from the frost, and have a sprinkling of water when the earth appears dry. The plants may be carefully removed into the open ground as soon as the season will permit. They may be set in a row along the border of the garden, allowing three feet distance between the plants, and be supported by a fence or trellis; or they may be planted in rows at four feet distance each way; but in this case, care must be taken to keep the branches from the ground, which may easily be done by setting small crotches on each side of the rows and laying small poles on them. This will preserve the goodness and increase the quantity of the fruit.

Tomatoes may also be brought to perfection by sowing the seed in a warm, light soil, about the first week in May; and if the situation be favorable, with good management, the product will be abundant.

There are but few who relish the tomato at the first taste; and few who are not extremely fond of it when properly cooked and they become accustomed to it. It is considered by physicians and others acquainted with its effects, not only a very delicious, but a very wholesome vegetable; indeed some will give a decided preference to a dish of *tomato sauce* or a tomato pie, when properly prepared, to any thing of the kind in the vegetable kingdom. There is no vegetable more easily raised, and none better pay the cultivator where they are generally known. They are used in various ways, either raw, with sugar, or stewed for sauce, or in fricasses and soups; for catsup or gravy, for meat and for pies or preserves, as well as for pickles and sweet-meats.

For the information of those not acquainted with the *tomato*, who may wish to try the experiment, we give the following directions for preparing and cooking them. Take them when ripe and red, dip them into scalding water, and take off all the skin, cut them in quarters and scrape out the seeds; then put them into a clean stew-pan and let them simmer about fifteen minutes, then put in a little butter and pepper, stir them a few minutes and they are done. Some prefer adding some crumbs of wheat bread or grated crackers. For pies or preserves the tomato requires a little more sugar than the peach to make it equally palatable. The process of making is much the same as with other fruit. Tomatoes may be preserved fresh by covering them with sugar. The green fruit is often pickled, like the cucumber or pepper. When prepared according to the following directions they make an excellent sauce or gravy for meat or fish.

To make Tomato Catsup.—Collect the fruit when fully ripe, before any frosts appear, squeeze or bruise them well, and boil them slowly for half an hour, then strain them through a cloth, and put in salt, pepper and spices to suit the taste, then boil again and take off the scum that rises, so as to leave the liquor in its pure state; keep it boiling slowly until about one-third of the juice is diminished, then let it cool and put it into clear glass bottles, corked tight and kept in a cool place for use. After standing awhile, should any sediment appear in the bottles, the liquor should be poured off into other bottles, and again corked tight.

TURNIP.—The *early flat turnep* may be sown for early use in March or April—also in May and June for summer use, as those sown early become rather tough and stringy, and run up to seed in the latter part of the season. They may be sown broad-cast or in drills, fifteen or sixteen inches apart, and thinned out to three or

four inches distant in the rows; and if the soil is good, light and mellow, they will thrive well, and afford a healthy and nourishing variety to other summer vegetables. The *Flat Field turnep* is the most suitable for fall and winter use, and should not be sown till the last of July or first of August, or still later; many prefer the 10th of August. In a favorable season they will do well if sown the last of August or first of September; they have indeed been found to be much sweeter and better in the southern part of this State than those sown earlier. But with us it is not safe to sow so late, as the cold season may set in early, and stop their growth.

Newly cleared land is found to be the best for these, as it generally produces the largest and sweetest turneps, and they are less exposed to the depredations of insects. A sandy or gravelly loam is reckoned the most favorable soil, and they will generally do well if sown on a green sward that has been turned up to a good depth the preceding spring, and yarded with cattle or sheep, with repeated harrowing during the time, in order to mix the manure with the soil. Before sowing, plow the ground again, make it smooth and level with harrowing, and at a time when the ground is sufficiently moistened with rain, sow your seed broad-cast or in drills, as you choose; but care should be taken not to sow too thick, and even then they will doubtless require a considerable thinning. If sown broad-cast, it will require more labor to thin them out and keep them clear from weeds, though the first labor will not be so much as sowing in drills. They should be thinned to the distance of six or eight inches.

Turneps are often injured by the ravages of a small black fly, which in the quickness of its motions very much resembles a flea. Against this there are various preventives recommended. There is perhaps none better than that mentioned by *Abercrombie*, which is, to soak the seed in sulphur water, at the rate of an ounce of sulphur to a pint of water, which will be sufficient for soaking three pounds of seed.—Some recommend sowing ashes or lime over the ground after the seed has come up. This will generally have a good effect if sowed when the dew is on.

If boiled in water with corned or salted meat, (which is a common practice in many families,) they should not be peeled at all. Turneps raised in a suitable soil, will be fair and smooth, and of a sweet flavor, and when first pulled, will wash white and clean without peeling. After being gathered and stowed away in the cellar awhile, the dirt adheres to them; they may then be put into a pail of warm water, so as to moisten the skin, and scraped with a knife and washed clean, fit for the pot, without the

least necessity of peeling. A turnep is surrounded with a coat or skin under the scarf skin, which in a common sized turnep is nearly of the thickness of an orange peel. This skin, in peeling, is often cut through, by which the turnep, in boiling, becomes completely water-soaked, and the sweetness is boiled out; it is then unfit for the table. A better way of cooking turneps or potatoes is to steam them instead of boiling them in water.

But good sweet turneps, raised in a suitable soil, having no rank taste in them, are much better cooked by cutting them into small pieces and stewing them. While stewing, mash them up in the kettle, and when sufficiently done, take them up and dress them with a little salt and butter.

MURRAIN IN CATTLE.—To many persons it will no doubt seem strange, to consider the origin the two disorders, so very different in their appearance, symptoms, and effects, as the botts and murrain, as arising from the same cause—namely, indigestion; but, as I conceive that they are engendered by a disordered state of the stomach, caused by sour and unwholesome food, and that they might both be cured, or which is better, be *prevented*, by timely administration of a medicine, alkaline in its nature, I believe that reason will bear me out in the conclusion to which I am partly led by perusing an article on this subject in the Cabinet, where it is said, (quoting from the American Farmer,) “Some years since I purchased a horse, but he had the appearance of laboring under disease. I commenced a course of treatment which I had before pursued in cases similar to appearance, but without effect. I was therefore induced to try the use of *lime*, as I was confident he was filled with botts, for he had discharged several. I therefore commenced by giving him a table-spoonful of slaked lime three times a week in bran mashes. After pursuing this course near two weeks, the botts began to pass away in quantities, varying from ten to twenty, which he would expel from his intestines during the night. In the mean time his appetite began to improve, and in six weeks he was one of the finest geldings I ever saw. From that day to this I have kept up the use of lime among my horses, with decided benefit; and, as an evidence of its good effects, I have not lost a horse since I began to use it. And lime is a certain preventive in keeping cattle from taking the murrain. As an evidence of this fact, I have used it among my cattle three times a week, mixed with salt, for three or four years; and in that time I have not lost a single animal by this disease; but, in the mean time, some of my neighbors have lost nearly all the

cattle they owned. But I will give a stronger case than even the one above mentioned. One of my neighbors who lost his cattle, had a friend living within two hundred yards of him, who had several cattle which ran daily with those that died, and his cattle all escaped. He informed me that he made it an invariable to give his cattle salt and lime *every morning*. I have, therefore, no doubt but salt and lime are a sure and infallible remedy for botts in horses and murrain in cattle.”

And I am reminded of a circumstance by a friend, who has often before mentioned it. He had two fields of pasture near his house. On one of these he spread lime upon the turf to the amount of more than 200 bushels per acre; but, as the other field lay immediately below his cattle-yard, from whence he had formed drains to carry the water over its surface in the most complete manner, he determined to let that suffice for a dressing; and the effect of the highly impregnated water from the yard was a growth of grass truly astonishing. Both fields were kept in pasture, and when the stock had eaten one of them down, they were removed to the other, and so changed regularly about. But the effect of the different crops on the appearance of the stock, horses and cattle, is not to be expressed; for while feeding on the limed land their coats were close, shining, and healthy, and their spirits light and cheerful, even when they were obliged to labor hard to obtain a belly-full; but when turned into the watered grass, six inches or more in height, a difference for the worse could be perceived in twenty-four hours. and every day after they lost condition amidst the greatest abundance, with coats rough and staring, lax in the bowels and flaccid, with distended paunches, dejected countenances, and sluggish in their movements. But the transition to health and vigor and good looks was quite as sudden and apparent on a return to the limed land. My friend adds, he never had an instance of the murrain or botts, while his stock fed on these pastures, but is satisfied he should have had both, but for the change to the limed land.

In conclusion, I would ask, is it not fair to draw the following deduction from what has been said, namely, that all dairy pastures ought to be heavily limed; it being the most natural thing in the world to suppose that a proper secretion of milk, the best and most wholesome, depends very much on the nature of the food with which the animals are fed? Ergo, lime your pastures, and allow your stock as much salt as they will consume daily, for I am convinced that lime and salt are a remedy for “botts in horses,” as well as the “murrain in cattle.”—*Fur. Cab.*

MANURES.—According to Leibig, the evacuations of an adult, liquid and solid, will annually yield 547 lbs. or one and a half pound per day. This is sufficient to manure fully one acre of wheat or other grain. But even in the modes of preserving and using it, by the aid of lime, much of its ammonia is wasted; and it has been shown, that to the ammonia the wheat owes its nitrogen, the element on which we have most to depend for improvement, both in quality and quantity. Lime should no more be mixed with night soil, than with gas liquor; on the contrary, the matters added to absorb the liquid, should have an acid tendency. Gypsum does very well by double decomposition. Peat earth is acidulous enough to fix the ammonia, where at hand; but in large towns, this earth often requires pretty distant carriage. Refuse bark is, however, generally produced in populous places, and is an incumbrance to the tanner, from which he is obliged to contrive various methods for relieving himself; amongst the rest burning, to the great annoyance and suffering of the neighborhood.

But tanners' refuse bark has also enough acidulous quality to fix the ammonia in night soil; and being so generally at hand in populous towns, may be employed for the purpose extensively.

Three parts of tanners' bark to one of night-soil (urine included, which is as valuable as any part,) will make a stronger manure than stable-dung; and with this further advantage, that the stable-dung requires to be rotted, to reduce the long straws, and kill the undigested seeds it contains; whilst the bark being already short, and the night-soil containing no seeds, it may be carted to the field at once; thus saving the heavy waste in rotting.

In the tan-yard, the bark may be stercorised, by having a privy or two, and suitable corners for the workpeople, all made to drain upon the heap; calculating say one pound of evacuations liquid and solid from each individual, per day, and proportioning the bark to it; what is above that quantity being disposed of to other persons, for the same purpose. All the hide wool and glue washings and house drainings should run into the same, which should be roofed over, to keep off the rain, but with open sides to encourage evaporation of the moisture. All the ashes of fires, whether of the works or house, should be added, to help the absorption, and destroy the smell; and by this means a tanner employing twenty-five hands may turn out twenty-five pounds evacuations; add three times the quantity of tanners' bark seventy-five pounds; add for ashes, &c. above detailed, and we have one hundred and fifty pounds of manure per day, richer than stable-dung, much better for wheat,

and losing nothing in rotting as not required. In other places, as private gardens, school grounds, &c., the bark may be procured from the tanner, and added to the privy sink, in rather larger proportions, reckoning the evacuations as one and a half pounds per entire day of twenty-four hours. Much less bark will do, say half as much as the night-soil, making up the quantity with garden mould; but the bark is so much additional vegetable matter, at little cost. It may be thrown in, a load at a time, for the excrement to fall upon; but the ashes should be added daily, so as to lie on the top, and absorb the smell. A long and large trunk should rise from the sink, to encourage evaporation and carry up, also, the smell still remaining; for although much subdued by ashes, it cannot be altogether destroyed, without careful mixture not practicable for such a purpose. In this manner large quantities may be collected.

Peat earth will do instead of bark, as above stated, with the precaution not to throw it in in cohesive lumps, which will not absorb, but as dry and crumbly as possible. The ashes are equally useful in either case.—*Eng. paper.*

DISEASES AND TREATMENT OF CATTLE imported into the South; by Col. W. Hampton. All cattle imported from England, the north and west, are very liable to be attacked with a fatal disease, which I take to be an inflammation of the brain.

Young cattle, from eight months to one year old, are less subject to it than those more advanced in life. If they survive the summer and autumn, I consider them safe, although great care should be taken of them the second season. They should be brought into the state as early in the fall as possible, kept in good growing condition through the winter, and in the spring be removed to a high healthy position, have easy access to pure water, and their pasture as much shaded as the nature of the ground will admit. In August and September, they should be kept in a cool stable during the heat of the day, and at night also, the dew at that season being almost as injurious as the intense heat of the sun.

With these precautions, I think more than half would escape the disease, the first indication of which is usually a languid appearance of the animal, followed by the loss of appetite, short, quick breathing, with more or less fever, and not unfrequently accompanied by a cough.

I have hitherto considered this disease, when once established, incurable. I have recently learned, however, that by sawing off the horns, close to the head, nine out of ten would recover. In two cases only have I known the remedy to be tried, and in both the experiment proved successful.

HORN-AIL, by *Joseph Feihrer*.—As this disease is of an inflammatory character, the application of spirits of turpentine and the like, which produce inflammation, is entirely wrong.

When the animal is observed to be suffering from this disorder, one or two quarts of blood, according to the size of the animal, are to be drawn immediately from a neck vein. Then two table-spoonfuls of the following powder are to be given three times every day, the powder being previously dissolved in a pint of lukewarm water; this to be continued until the animal recovers: Glauber salts, six ounces; cream of tartar, two ounces; purified saltpetre, two ounces; powdered root of althæ, one ounce and a half.

It is necessary besides, to rub the animal frequently during the disease, principally on the back. But if the animal should be costive, either of the following clysters is to be given:

Take a handful of chamomile flowers, two handfuls of flax-seed; boil them in two quarts of water, strain them, and add eight ounces of linseed oil, and three table-spoonfuls of common salt. This clyster is to be applied by means of a syringe.

Should these articles not be at hand, take one quart of wheat bran, pour two quarts of boiling water on it, strain, and add eight ounces of flax-seed oil and two ounces of common salt. This clyster is to be lukewarm when applied to the rectum or straight gut, by the means of a syringe or a fit funnel.—*Far. Cab.*

RAISING POTATOES BY THE USE OF LIME. The only two cases in which potatoes were not a failure here, were where lime had been extensively used. It is supposed it retained the moisture besides serving other useful purposes to the crop in question. The two farmers who used it had each a thousand bushels of potatoes; where their neighbors with as good prospects, except the lime, had only five hundred bushels each.

The kind of soil to which the lime was applied is not mentioned, but according to our recollection a considerable part of the land in this district has a dry deep soil of the color of a pale brick, with a slight mixture of gravel, but with neither rock, solid clay, or hard pan of any kind near the surface.

It is certainly the case that potatoes manured with a mixture of stable manure, and of kelp or rockweed which had begun to putrefy, will withstand a drought which considerably diminishes the crop manured with nothing but stable dung.—*Colo. Far.*

LARGE HOG.—Mr. Jameson, of Cornish, Me., March 24, 1842, killed a pig 22 months and 12 days old which weighed alive 1010 pounds.

Dressed he weighed 905 lbs—without the caul, that weighed thirty-eight and a half pounds. Making his whole weight 943 1-2 pounds—a loss of only 66 1-2 pounds. He was a cross of the Berkshire on other breeds—girted seven feet, and was five feet and about ten inches in length. His keeping till September last, was not high or expensive. Six bushels of potatoes and two of meal, with weeds and the spare milk of three cows, lasted him and two breeding sows of the same age, two weeks. The potatoes were boiled, mashed up in a large tub, the meal added and water enough put in to make it quite thin. In addition to this feed night and morning since September, he has also three quarts of corn at noon.—*Gen. Far.*

NEW VARIETY OF RICE.—A French resident at Jehat in Mongolia, has lately sent to Europe a variety of rice which is supposed, will prove a great acquirement to southern latitudes. Rice usually requires a moist soil and irrigation. The specimen from Mongolia grows in a dry soil and is cultivated like our common grains.—[Eds. Am. Agt.]

PRESERVING EGGS.—One bushel of quick-lime, thirty-two ounces of salt, eight ounces of cream of tartar. Mix the whole together, with as much water as will reduce the composition to such a consistency that an egg, when put into it, will swim.—*Eng. paper.*

To wash Black Worsted or Woollen Hose.—If new, soak all night; then wash in hot suds with beef's gall, a tablespoonful to half a pail of water. Rinse till no color comes out. Then stretch on stocking frames, or iron them when damp on the wrong side.

ADVERTISEMENTS.

THE FAST TROTTING HORSE BELLFOUNDER.

Will stand at Middletown, Butler Co., Ohio, this year at \$8 for the season. He is a bright blood bay, with black legs, mane and tail; is 16 hands high, and weighs 1200 lbs. He has proved himself a first rate stock horse, some of his colts having sold near N. York for \$1000. He has trotted his mile in 2 min. 46 sec., and is every way a sound and desirable horse, his colts being equally adapted to the road and heavy farm work. Address Dr. ANDREW CAMPBELL as above.

B. H. HENDRICKSON, MIDDLETOWN, BUTLER COUNTY, OHIO,

Is now prepared to fill orders for thorough-bred Berkshire Pigs, from the late imported boars Windsor Castle, Earl Craven and Sultan, and twenty choice sows purchased of A. B. Allen, a part of his recent importation. Pigs in pairs from this superior stock will be furnished substantially caged and delivered on the canal at Middletown, or on board steamboat at Cincinnati, from \$30 to \$50 according to age and quality. Orders accompanied with cash, will always secure the preference.

ALSO—Pigs bred from the superb boar Kenilworth, of a stock of the largest and finest kinds of white hogs in England, also imported by Mr. Allen last October, crossed on the splendid large white Miami hogs of this country. The Miamis have been long noted for their large sizes. Animals of this breed have occasionally come up to the enormous weights of 1200 and 1400 lbs, and it is believed that the cross of Kenilworth on them, will easily attain the weights of 700 to 1000 lbs at 18 months and two years old, if well fattened. Pigs of this cross \$25 per pair caged and delivered as above.—Refer to the editors of this paper.

M. L. SULLIVANT, of COLUMBUS, Ohio, has for sale Short Horn Cattle, Mules, Leicester Sheep, and Berkshire Pigs.

l,
s.
a
of
t,
l.
h
o
e
e
l,
d
n
e
at

i-
o
l,
i-
d
s
n

-
s
at

,
s
e
g

s
e
d
d
d
s
d-

re
n
n,
o-
d
n-
c-

k
id
n
o-
ill
ed

ri